**ALBERTA AGRICULTURE'S**
**ANNUAL REPORT**
**1983-84**

TO THE HONOURABLE FRANK LYNCH-STAUNTON
Lieutenant-Governor of the Province of Alberta

Sir:

I have the honor to submit the annual report of Alberta Agriculture for the fiscal year ended March 31, 1984.

I have the honor to be, Sir,

Your Obedient Servant,
LEROY FJORDBOTTEN
Minister of Agriculture

# ALBERTA AGRICULTURE'S ANNUAL REPORT 1983-84

HONOURABLE LEROY FJORDBOTTEN
Minister of Agriculture

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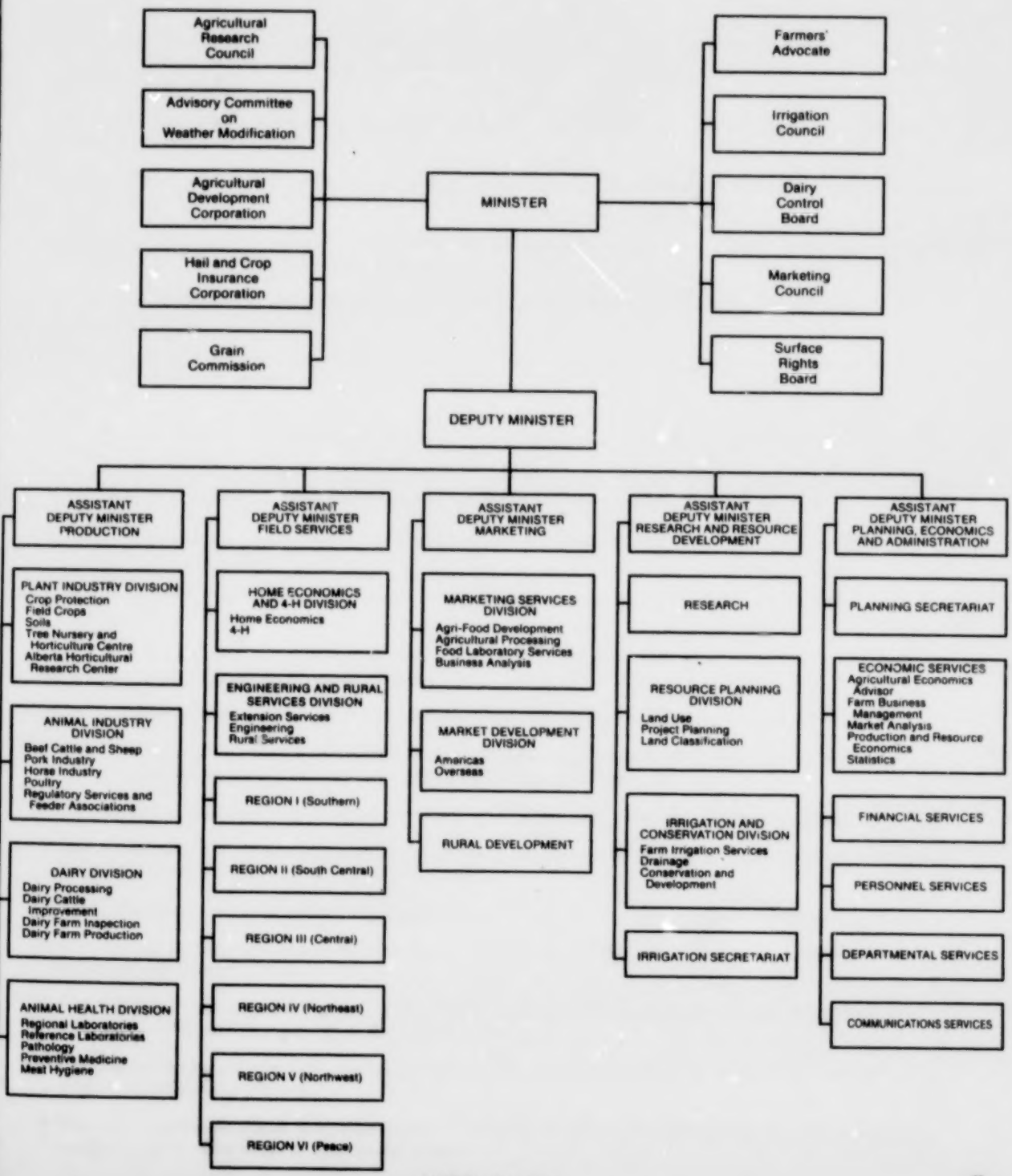
I have the honor to submit the annual report of Alberta Agriculture for the fiscal year ended March 31, 1984.

Respectfully submitted,

H.B. McEwen
Deputy Minister

# ORGANIZATIONAL CHART



# HIGHLIGHTS

- The implications of the change in the Crow (statutory grain freight rates) were analyzed and made available to the public. A comprehensive presentation on Bill C-155 was made to the House of Commons Standing Committee on Transportation.
- Proposals on red meat stabilization and grain stabilization were studied as a means of increasing stability of income for farmers.
- National feed grain policy was monitored and proposals for some deregulation of domestic grain marketing were developed.
- Alberta producers were surveyed to determine their information requirements and whether the present system for the delivery of that information was adequate.
- The research division managed grants totalling $7,842,147 in 1983-84 for 251 agriculturally related research projects.
- Significant input was made to public hearings on maintaining and expanding the agricultural land base and a study on agricultural land demand and development was supported.
- Wetland salinity maps were prepared for 493 800 acres in the province. Dryland salinity investigations were conducted on 33 quarter sections and salinity control efforts were expanded in regions 2, 3, and 4.
- A preliminary forecast of the cost of irrigation rehabilitation in the province was prepared. General rehabilitation reports were completed for five small districts as well as 14 component block reports for larger districts.
- Only five per cent of Alberta cattle were infested with warble flies in 1983 compared with seven per cent in 1982 and 14 per cent in 1980.
- Rotational grazing demonstrations by seven forage associations showed that getting more pounds of beef per acre was feasible.
- No rabid skunks have been found in the Alberta-Saskatchewan border zone since 1977. Wherever rabies has been found in other parts of the province, all skunks were destroyed.
- Dairy Herd Improvement services previously administered by the department were privatized in 1983.
- The Alberta Food Processor's Association and the Alberta Food Marketing Advisory Committee have been successful in getting many food imports replaced by Alberta products.
- A promotional food campaign in Japan continued with the successful launching of Alberta cheese.
- Alberta exchanged trade missions with Heilongjiang, its sister province in China. The cooperative Heilongjiang range management improvement project was arranged.
- Cattle and swine sales were made to Czechoslovakia and leafcutter bees and equipment were sold to Hungary.
- Two new agricultural service boards were established, one in the Municipal District of Acadia Valley and one in Improvement District 17 East.
- The 4-H branch conducted a successful promotionalcampaign called *Score Goals with 4-H* which resulted in increased interest and membership in the 4-H program.
- Farming for the Future's on-farm demonstration program remained extremely popular, with over 107 projects in progress or planned.
- The soil conservation slogan *Keep Your Stubble Up* proved effective in persuading more farmers to leave crop residue cover on their fields to prevent soil erosion.

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# 1983-84 ANNUAL REPORT

## WEATHER MODIFICATION

The current five-year weather modification research program in Alberta completed its third year during 1983-84. This project was supported by Alberta Agriculture and operated by the Alberta Research Council with general direction from the weather modification advisory committee.

General hail suppression-cloud seeding operations were conducted in 1983 from late June until the end of August between Red Deer and Calgary. In addition, a number of specific seeding experiments were carried out between Red Deer and Edmonton.

Cloud seeding activity in 1983-84 was reduced from the levels of previous years in accordance with a revised research strategy. The low freqency of hailstorms in August, when seeding was required on only five days, also contributed to the decrease.

In total, hail was reported on 37 days in the southern project area in 1983-84, and on 35 days in the northern region.

As part of the hail research and cloud seeding program, a research aircraft contracted by the Alberta Research Council flew more than 200 hours in 1983-84 on approximately 100 missions. This aircraft, used to make detailed measurements inside storm clouds, has proven to be a major breakthrough in data collection for weather modification research.

The aircraft was also used during the year in seeding experiments attempting to increase rainfall, and for assessing the potential for snowfall augmentation. A total of 185.5 flight hours was accumulated on 80 research missions.

Another significant project undertaken in 1983-84 was an attempt to evaluate the effectiveness of ground-based cloud seeding systems. Under this program, 88 silver iodide generators were operated in an area south of Calgary.

During 1983-84 the weather modification advisory committee met monthly with representatives of the atmospheric sciences department of the Alberta Research Council to make recommendations concerning the weather modification program and to monitor its progress.

## AGRICULTURAL DEVELOPMENT CORPORATION

The Agricultural Development Corporation (ADC) was established by the Agricultural Development Act (1972) to provide financial assistance to farmers and agricultural processors in the province. Loan authorizations during the 12 years from June 1972 to March 1984 amounted to 101,196 loans totalling $2,062,156,000. Of this number, 24,423 loans totalling $1,071,500,000 were active and outstanding on March 31, 1984.

ADC continued to provide assistance to agricultural enterprises through direct loan financing on a long-term basis, and an extensive loan guarantee program through other lenders to cover short and intermediate term financing. During 1983-84 direct farm lending totalled $149.7 million, compared with $204.3 million in 1982-83, and reflected the continuing uncertain economic circumstances which prevailed throughout the year. Of this total for 1983-84, loans made to beginning farmers amounted to $142.1 million. Other direct farm loans amounted to $7.6 million during the year. The 1169 direct farm loans made in 1983-84 averaged $128,049. This average loan amount was lower because of the number of beginning farmers opting to take advantage of the staged option feature.

In 1983-84, a total of $89.3 million was made available by other lenders under ADC's Alberta Farm Development Loan guarantee program. A further $4.2 million was approved for Alberta farmers as specific guarantees. These guaranteed amounts were approved for more than 6100 loans to primary producers.

ADC approved $36 million in incentives during 1983-84. Most of these incentives represented interest reductions to beginning farmers, but incentives paid to specific sectors of primary agriculture were also included. ADC field staff provided counselling services to Alberta farmers through 38,633 field office interviews and 4,620 farm visits during the year.

ADC continued to provide financial assistance to secondary processing and agricultural services business throughout the province. During 1983-84, ADC authorized 23 direct and specific guaranteed loans to agribusiness for a total of $19.3 million.

During 1983-84 ADC's preferred interest rates remained unchanged. At the year end a number of policy and program changes were introduced in order to ensure that future funds loaned are reserved for those individuals who continue to be actively involved in farming, and to improve the likelihood that borrowers will succeed in their farming operations.

# ALBERTA HAIL AND CROP INSURANCE CORPORATION[1]

Alberta farmers had the opportunity of insuring their grain crops against loss caused by all natural perils or against the single hazard of hail under programs offered by the Alberta Hail and Crop Insurance Corporation.

This provincial Crown corporation offered two separate programs: straight hail insurance and all-risk crop insurance.

The hail insurance program has been entirely self-sustaining since its inception in 1938 under the Alberta Hail Insurance Board. Premiums paid by farmers have been set at a level that would cover administrative expenses, indemnities and build up a reserve to be drawn on in heavy loss years. In years of favorable experience, premium refunds have been paid to policyholders.

The all-risk crop insurance program was jointly funded by the farmer policyholders, and the governments of Alberta and Canada. Premiums were split equally between the policyholders and the government of Canada. The province paid all administrative expenses and in addition, it paid a portion of the farmers' share of premium in the higher risk areas.

Close to two-thirds of Alberta's 1983 cereal and oilseed acreage, as well as a substantial share of the special crops, was insured under these programs.

In addition, the Alberta Hail and Crop Insurance Corporation offered drought insurance for cultivated hay and pasture crops over a broad area in central and southwestern sections of the province.

## Hail Insurance

Hail damage to cereal and other crops in 1983 was about normal, with the loss-to-premium ratio being 71.5 per cent compared to the long time average of 72.8 per cent. The largest and most severe storms occurred in southern, west and east central regions and in the area immediately north of Edmonton.

Premium income in 1983 was at a record level, while total risk carried was just slightly below the record of 1982.

[1]*Alberta Hail and Crop Insurance Corporation publishes a statutory annual report which provides more detailed information than that given in this section.*

Following is a comparative summary of business and losses for the years 1983 and 1982:

**SUMMARY OF HAIL INSURANCE PROGRAM**

| | 1983 | 1982 |
|---|---|---|
| Policies | 10,531 | 10,621 |
| Acres insured | 3,690,124 | 3,669,500 |
| Risk | $259,190,980 | $262,552,900 |
| Premium | $ 15,953,457 | $ 15,123,401 |
| Indemnities | $ 11,407,498 | $ 17,525,617 |
| Loss-to-premium ratio - % | 71.5 | 115.9 |

In addition, under a blanket agreement the corporation insured all cropped acreage in the Eastern Irrigation District at a level intended to cover water rates.

## Crop Insurance

Under the Canada-Alberta crop insurance program, insured acreage, premiums, coverage and losses paid were at an all-time high.

Approximately 50 per cent of the grain and oilseed acreage in Alberta was insured under this program. Coverage was also offered on dry beans, seed peas, grain corn, potatoes, vegetable crops grown for processing and alfalfa for pelleting.

Losses under the all-risk programs were particularly heavy, mainly as a result of the dry spring, followed in central regions by excessive rainfall, and then extreme heat and drought in the latter part of the summer. Hail damage also contributed to the record indemnities. Following is a statistical summary for the past two years:

**SUMMARY OF ALL-RISK INSURANCE PROGRAM**

| | 1983 | 1982 |
|---|---|---|
| Policies | 20,326 | 18,845 |
| Acres insured | 8,337,155 | 7,258,010 |
| Risk | $667,277,885 | $551,343,316 |
| Hail endorsement coverage | $559,626,085 | $461,185,281 |
| Premium* | 87,248,684 | 70,869,347 |
| Indemnities | | |
| Basic policy | 48,994,938 | 30,202,034 |
| Hail endorsement | 25,456,452 | 31,896,619 |
| Total | 74,451,390 | 62,098,653 |
| Loss-to-premium ratio - % | 85.33 | 87.62 |

*Includes farmers' share, federal contribution and the provincial high-risk subsidy.

## Hay and Pasture Insurance

Experience under the hay and pasture insurance program was as follows:

**SUMMARY OF HAY AND PASTURE INSURANCE**

| | 1983 | 1982 |
|---|---|---|
| Number of policyholders | 609 | 729 |
| Coverage | $5,805,135 | $6,539,250 |
| Premium | $ 755,115 | $ 799,148 |
| Number of indemnities paid | 574 | 375 |
| Total indemnities | $1,718,120 | $1,049,857 |
| Loss-to-premium ratio - % | 227.5 | 131.4 |

Hot dry weather, which reduced hay and pasture production in south-central and southwestern regions, resulted in the loss.

### Honey Program

The corporation offered insurance on honey and covered the major part of Alberta's commercial honey production. There were 89 policyholders in 1983. The loss-to-premium ratio was 116 per cent, the high loss ratio being mainly due to a poor honey crop in the southern section of the province because of the hot dry summer.

### Wildlife Damage Compensation Program

Alberta Hail and Crop Insurance Corporation administers this program for the fish and wildlife division of the Department of Energy and Natural Resources.

## ALBERTA GRAIN COMMISSION

The commission continued to fulfill its mandate to examine all facets of the grain industry and to make recommendations to the Minister.

During the past year the commission continued to bring segments of the industry together. As a result of one such meeting a number of new alternatives for getting oats from farm to marketplace were developed.

The commission presented its views to the Canadian Grain Commission on the inclusion of new crops under its act.

Alberta Terminals Limited worked closely with the Alberta Grain Commission, and other department officials, in bringing the Snake-Columbia project closer to reality.

In addition to the projects outlined above, the commission continued to provide a 24-hour grain price information service. During the past year over 45,000 calls were recorded. Other on-going programs included the west coast traffic situation report and feed grain price report.

## FARMERS' ADVOCATE OF ALBERTA

The Farmers' Advocate reviewed numerous inquiries of concern to the agricultural community. A comprehensive annual report issued by the Farmers' Advocate office is available through the Minister of Agriculture or directly from the Farmers' Advocate.

# ALBERTA DAIRY CONTROL BOARD

The dairy board, operating under The Dairy Board Act, met its responsibilities in the administration of fluid milk, industrial milk and cream sectors. These responsibilities included the licensing of dairy producers, processors and distributors of fluid products; setting and adjusting fluid milk quotas; regulating time and payment to producers; and in general governing the sale of milk in Alberta.

The board was responsible for the operation of the Alberta milk market sharing plan, an industrial milk plan entered into by federal and provincial authorities. The board was a member of the Canadian milk supply management committee, a body responsible for the development of the national dairy policy.

The number of active dairy producers - fluid milk, industrial milk and cream - as of March 31, 1984, totalled 3,118. Total provincial production was down by 3.73 per cent from the previous fiscal year. Fluid milk production decreased by 1.86 per cent, industrial milk and cream production decreased by 8.73 per cent and 20.82 per cent respectively. Fluid milk sales decreased by 3.0 per cent from the previous year.

The board operated a fluid milk equalization pool for Alberta fluid milk producers. This plan successfully completed its ninth year of operation and enabled producers to share in the sale of fluid milk returns regardless of location or source of sales.

No additional producers were accepted under the graduated entry program. One hundred and twenty-two producers received additional allotments of fluid quota under the graduated entry plan. A total of 930 industrial producers have entered the fluid sector since the start of the graduated entry program in 1975.

Producers' financial returns for fluid milk, industrial milk and farm separated cream advanced at intervals during the year. Fluid milk prices increased $0.98 per hectolitre September 1, 1983, ending the year at $47.15 per hectolitre. Industrial milk advanced $0.26 per hectolitre April 1, 1983; $1.14 per hectolitre August 1, 1983; $0.38 per hectolitre January 1, 1984, ending the fiscal year at $36.38 per hectolitre. Churning cream prices also increased in April, August and January for total increases of 42 cents per kilogram of butterfat.

Board staff maintained an audit program of all fluid processors together with inspections to maintain and ensure compliance with regulations issued under the authority of The Alberta Dairy Board Act.

# SURFACE RIGHTS BOARD[1]

Under The Surface Rights Act, the board granted operators the right to use the surface of land for mineral development and for the construction of pipelines, power transmission lines and telephone lines; and determined the amount of compensation payable by the operators.

The board held hearings and made decisions with respect to damage disputes and requests for review of annual compensation under board compensation orders and surfaces leases. It continued to assist in the recovery of money under board orders and surface leases.

The Expropriation Act was administered by the board with respect to expropriation of land authorized under or pursuant to section 29 of The Water Resources Act and The Hydro and Electric Energy Act.

[1] *The board presents a detailed annual report to the Minister of Agriculture each year.*

# AGRICULTURAL PRODUCTS MARKETING COUNCIL

The council was responsible for the administration of The Marketing of Agricultural Products Act. Pursuant to the act, the council facilitated the establishment and supervised the operation of producer marketing boards and commissions. Eight marketing boards and three commissions operated under the act: Alberta Broiler Growers' Marketing Board, Alberta Cattle Commission, Alberta Egg and Fowl Marketing Board, Alberta Hatching Egg Marketing Board, Alberta Pork Producers' Marketing Board, Alberta Potato Commission, Alberta Sheep and Wool Commission, Alberta Sugar Beet Growers' Marketing Board, Alberta Turkey Growers' Marketing Board, Alberta Fresh Vegetable Marketing Board and Alberta Vegetable Growers' Marketing Board.

The role of Alberta's marketing boards and commissions became more prominent as producers increasingly viewed these organizations as a means of improving their economic well-being in light of current economic conditions.

The Alberta Broiler Growers' Marketing Board entered into an agreement with the Canadian Chicken Marketing Agency whereby Alberta chicken producers were committed to maintaining chicken production within specified limits for 1983 while not formally becoming a participant in the agency. The Canadian Chicken Marketing Agency, which has jurisdiction in the rest of Canada, set provincial quota allocations for the other provinces.

The Alberta Cattle Commission spent a considerable amount of time and effort in discussing and analyzing the pros and cons of a national red meat stabilization proposal.

Despite the efforts of the Alberta Egg and Fowl Marketing Board, the production of commercial eggs in Alberta continued to be restricted at levels significantly below market requirements owing to the inability of the Canadian Egg Marketing Agency to develop an acceptable policy for the distribution of egg marketing quota among the provinces.

The Alberta Hatching Egg Marketing Board, after having some problems in its first year of operation due to decreased demand for its product, made some adjustments to its quota policy and experienced a less difficult year of operation.

The Alberta Pork Producers' Marketing Board continued to function as a compulsory central selling agency in the marketing of hogs to processing plants.

Potato producers continued to review the establishment of a marketing board as a means of rectifying the industry's marketing problems. The Alberta Potato Commission carried on with its promotional and research activities on behalf of producers.

The Alberta Sheep and Wool Commission continued to direct its activities toward expanding the province's sheep industry.

The Alberta Sugar Beet Marketing Board was formally established in the fall of 1983. Its main purpose will be to negotiate producer contracts and to establish a system of quotas.

Turkey production in Alberta continued to experience pressure as a result of restricted quotas set by the Canadian Turkey Marketing Agency. The Alberta Turkey Growers' Marketing Board participated in this agency which sets quotas for provincial turkey production.

As a result of economic pressure on the processing sector, Alberta's two vegetable marketing boards continued to experience some difficulty in their efforts to expand the vegetable industry.

Council provided assistance to the Alberta Soft White Spring Wheat Growers' Association, the Alberta Canola Growers' Association, the Palliser Wheat Growers' Association and a number of other commodity groups which were assessing the possibility of utilizing the marketing legislation.

Council continued to advise marketing boards and commissions under its supervision of their responsibility not only to producers but to other sectors of the industry and the public.

# PLANNING, ECONOMICS AND ADMINISTRATION

The planning economics and administration sector was organized and staffed to serve the following purposes:

- to provide effective and appropriate administrative and support services consistent with government and department policies to the Minister and departmental staff.
- to provide to the public a full range of economic and planning services that will contribute to a viable agricultural community.

Consistent with such purpose a number of specific objectives have been enunciated:

- to ensure the department's internal and external communication needs are effectively met in making the agricultural community better informed.
- to ensure the provision of a complete range of up-to-date applied agricultural economic services that will contribute to a viable agricultural industry.
- to provide coordination for applied agricultural economics in the department.
- to ensure the department effectively manages and controls revenue and expenditures in compliance with The Financial Administration Act.
- to provide effective personnel administrative support services to assist the staff of Alberta Agriculture in achieving their objectives.
- to effectively meet the needs of the department for strategic planning, program planning, evaluation, policy analysis and policy development.
- to provide appropriate and timely service for space, telephones, vehicles, legislative and legal needs, records management, library and electronic data processing to the department in an economical way consistent with central agency guidelines.

## PLANNING SECRETARIAT

During 1983-84 the Planning Secretariat was involved in three main areas: western grain transportation, market stabilization activities and a review of what agriculture clients want and how we deliver services to those clients.

Western grain transporation activities included preparation of a submission to the House of Commons Standing Committee on Transportation, which outlined the government position on Bill C-155, and made suggestions for change. Information on the impact of the bill was made available.

Stabilization activities included representation on a federal- provincial producer task force for red meat stabilization as well as preparation of background information on grain stabilization theory and alternatives.

Feed grain policy and review of the Alberta beef processing industry activities continued during the year.

A major undertaking was a survey of information needs of our farmer clients. Along with that survey, the secretariat reviewed the way the department delivered services to the farm client and made recommendations to improve that delivery.

The secretariat completed evaluation studies on the green certificate program, the pork producers market insurance plan, the agreements and subagreements of the department with the Faculty of Agriculture and Forestry, and the spring conference.

Briefing material was prepared for general agricultural issues and the 1983 ministers of agriculture conference.

# ECONOMIC SERVICES

Economic Services continued to provide applied economic services to the agriculture industry. Farmers' needs for economic information and services to help solve business and marketing problems and evaluate opportunities continued to be a high priority.

During the year farmers and farm organizations expressed increased interest in information on economic factors affecting agriculture and for services to help address financial, marketing and production issues.

## Agricultural Economics Advisor

The agricultural economics advisor analysed and made recommendations in regard to policies related to various agriculture trade issues as required by the Minister and Premier in dealing with the federal government. In 1983-84 activity related primarily to interdepartmental trade policy issues.

The advisor monitored, prepared anticipatory memoranda and advised on dumping and countervail actions, export licensing and other regulatory measures of foreign governments and agencies, and actions of federal and provincial governments having an impact on Alberta's agricultural industry (products involved included beef, luncheon and other prepared meats, canola products, sugar, potatoes).

Preparatory work on the possible new GATT round of trade negotiations was undertaken. Activity was initiated relating to free trade in beef with the United States. Briefing material was prepared for outgoing and incoming high level trade missions.

The advisor's office assisted in preparing reports for Alberta's "Strength in Diversity" submission to the Macdonald Commission, on economic development strategy for Alberta, on agriculture development strategy, and provided macro-economic input on various subjects including the Western Grain Transportation Act, Combines Investigation Act Amendment and market development issues.

## Farm Business Management Branch

The farm business management branch continued to develop and adapt farm management technology for use by farm families in making business decisions. Farm management courses were developed and presented in each region to provide district staff with a better understanding of the economic implications of production decisions.

The distribution of information was improved through effective use of *Agri-News* releases, back-up information for *Country Guide* articles, preparation of factsheets and *Country Guide* inserts and maintenance of over 100 publications.

The financial management section assisted farmers, field staff and agribusiness by interpreting legislation and providing information to aid managers in making sound decisions in credit management, tax management, labor management, business arrangements and estate planning.

The branch organized the agricultural workshop for lenders (65 attended this five-day event) and farm tax update seminars for accountants and lawyers (171 attended the one-day seminars held in Westlock, Vermilion and Lethbridge).

The farm planning section continued to disseminate information on microcomputers to farmers. The newsletter *Compufarm* increased the number of its subscribers to 2,300 as of March 31, 1984.

A full schedule of seminars and presentations was maintained to meet the increased use of computer technology. A home study course on microcomputers (The Alberta Farm Computer Course) was completed in January, 1984.

Staff had a key role in organizing and exhibiting at the first Agro-Electronic Show in Red Deer in April 1983. This show was highly successful with over 4,000 in attendance.

In a joint project with the statistics branch, the farm planning section expanded the custom rate survey list to over 2,000 names and prepared a Directory of *Custom Operators in Alberta.*

Section staff with staff of the dairy division assisted in counselling producers and writing a chapter on financial planning and management for the Alberta Dairy Production Course.

The farm records and analysis section continued to encourage the use of farm records as an aid in decision making. In recognition of the need for better financial analysis the publication *Analysing a Farm Business* was rewritten. The 1984 edition of the *Save-All Management Planning Calendar* was produced and 12,000 copies distributed.

The distribution of financial record books, (*Income and Expense Basic Records for Alberta Farmers* and *Prairie Provinces Farm Account Book*) increased to 11,000 copies. The publication *How to Select the Right Farm Accounting Software* met brisk demand.

Attendance at the seventh Managing Agricultural Technology for Profit seminar in Banff increased to 407 from 393 in 1983.

## Market Analysis Branch

The objective of the market analysis branch was to provide farmers and other members of the agricultural sector with timely and pertinent market-related information on which to base production and marketing decisions.

The branch continued to monitor and analyze agricultural commodity and product markets. The information gathered provided the branch with data with which to prepare market situation and outlook reports, to interpret policy and other developments related to agricultural markets, to offer marketing extension courses and to provide market news and information.

The branch prepared comprehensive reports on market prospects for the major farm commodities produced in the province. The information was made available to over 4,000 farmers, members of the legislature, and others through the *Market Situation and Outlook* reports. Information was further distributed through the branch's commodity publications such as *The Alberta Processed Alfalfa Market Newsletter*, through publications of other branches such as *Nucrop News*, *Forage Seed Notes* and *Sheep Footnotes*. Specific situation and outlook reports were prepared at the request of both in-house and outside clients.

The branch continued its extension program which gives farmers a more thorough understanding of the functioning of the market and provided them with market information on which to base business decisions. A revised edition of *The Grain and Oilseed Marketing Manual* was produced with the assistance of regional economists. The branch worked closely with regional farm economists and farm organizations with the aim of getting the extension program to a larger audience than could be reached by branch staff alone. Two outlook conferences were staged: Taking Stock in November 1983 provided farmers with market prospects for livestock, while Accent '84 in March provided farmers with market outlook information on which to base their seeding decisions.

The branch also disseminated market news and short-term analysis through *The Weekly Livestock Market Review* and *The Weekly Market Grains and Oilseeds Review* which were mailed to about 9,000 producers and industry clients. *The Monthly Livestock Slaughter Summary* and the weekly livestock and grain market chart service were published to supplement the regular market news publications of the branch. A computerized agricultural market data base, AGDATA, was maintained to facilitate internal research activities and for public use. The branch also worked closely with the Alberta Cattle Commission on its program for the collection and dissemination of cattle market news.

## Statistics Branch

The statistics branch provided agriculture-related statistical information to Alberta's agricultural industry including farmers, farm organizations, agribusiness and government.

Staff members maintained a close liaison with Statistics Canada, Agriculture Canada, farm and business organizations and other government departments. The branch completed several surveys where other sources were nonexistent or inadequate. One such survey was the sheep survey which obtained information on production and marketing intentions of Alberta sheep producers.

The annual *Statistics Yearbook* was released in August. This document contained a summary of agricultural data for the previous year. It was supplemented throughout the year by releases on current agricultural statistics.

A regular crop report was released every two weeks from May to October with a year-end summary published in December. A quarterly forage report supplemented the crop report.

An annual survey of beekeepers was conducted. It estimated the number of beekeepers, number of colonies, average yield and total production of honey in Alberta.

A one-page fact sheet presenting major provincial agricultural statistics was issued.

The branch continued its involvement in price collection and reporting by releasing three reports: weekly average retail food prices for Edmonton and Calgary; weekly producer, wholesale and retail food prices; and monthly average farm input prices in Alberta.

The branch continued to improve available data and information on agricultural imports and exports.

The branch continued to document information on agricultural products after they leave the farm gate. Products studied were milk, bread, pork and beef. Reports entitled *Market Margins* were released.

Branch staff conducted a specialty crop survey to obtain additional information on acreage and yields of specialty crops in Alberta. Summaries of the results were sent to producers who cooperated with the survey.

## Production and Resource Economics Branch

In October the production branch and the resource economics branch merged. While the production section continued to provide farm clients with farm input information that would help to improve the economic efficiency of their operations, the resource section directed most of its research effort toward determining the value of land and water resource development and use for agricultural purposes.

The production section undertook several research projects in livestock and crop production. The three year study of hog production in Alberta showed that during 1980-82, farrow-finish enterprises were decidely more profitable than finishing enterprises. Top farrow-finish managers had returns on investment of 24.5 per cent in 1982 and profits averaging $24.43 per hundredweight dressed pork produced. In contrast, finishing enterprises showed losses in 1980 and 1981, and a small profit of $1.37 per hundredweight in 1982.

Work continued on the second year of the sheep production study, 1983. Sheep producers had a very difficult year in 1982 with negative returns over variable costs of $31.29 per ewe and losses estimated at over $52 per ewe. Top producers had profits averaging $2.19 per ewe.

The branch monitored fluid milk production costs and provided the Public Utilities Branch (PUB) with regular monthly reports. As a result of reduced milk sales and relatively higher production costs, profitability fell from 12 per cent in 1982 to 10 per cent in 1983. An economic evaluation of the efficiency of several milking systems was started.

Analysis began on the 1983 sugar beet cost-return data. Poor weather conditions greatly contributed to reduced yields of sugar beets. Consequently, in spite of higher beet prices and lower production costs, estimated losses of $9.92 per tonne were 218 per cent greater than in 1981.

The regional farm enterprise research program continued in the Vermilion and Barrhead regions; 53 producers participated. Following consultation with district agriculturists and regional economists in several regions, an economic case study experiment was launched in four regions. The objective of this project was to obtain actual crop production cost data by soil type immediately after harvest, so that results could be distributed to participants well in time for planning their spring planting program.

The branch continued to publish the quarterly newsletter *Agriculture Transportation* which contained transportation costs, policy developments and freight rate changes that affected agricultural commodities shipped by various modes of transporation. Since December 1974 when the first newsletter was published, rail rates on grain and by-products for domestic movement have increased by 237 per cent to Toronto and by 312 per cent to Vancouver. Rail rates on live cattle shipped from Calgary to Toronto by double deck cars have increased by 174 per cent over the same time period.

Six issues of the newsletter *Grain Handling and Marketing* were published in 1983-84. The main focus of this newsletter was on the changes to the Western Grain Transportation Act (Bill C-155) and subsequent developments.

The resources section devoted a considerable amount of time to research associated with the agricultural land base study (ALBS). This interdepartmental study evaluated the potential for intensification and expansion of the agricultural land base.

Tentative results showed that it was economically feasible to convert rangeland to cropland and to seed native range to tame pasture. Similarly, woodland could be converted at $230 per acre into economically productive cropland. The potential for expanding agriculture on forested lands in Northern Alberta was determined. Despite the significant benefit to farmers from such expansion, there was an infrastructure cost to society, which could not be repaid solely by agricultural production.

A preliminary study of reducing summerfallow revealed that it was economically feasible to switch to continuous cropping on both dark brown and black soils in Alberta and marginally feasible on luvisols.

The economic feasibility of liming acid soils to increase soil productivity was investigated on two major soil zones, luvisols (Peace River) and dark brown (Central Alberta). Tentatively, liming appeared to be a viable economic alternative to expansion or intensification of crop production.

Soil salinity emerged as a major issue in Alberta. As part of the ALBS, the branch investigated the economics of control and reclamation of saline soils. It is estimated that 100,000 to 250,000 hectares were affected by salinity. Although farmer investment costs for vegetative control of dryland salinity seem prohibitive in the short run, this method appeared feasible. Several alternative methods of control and reclamation were studied. The economics of draining irrigated saline soils was also examined and the procedure was shown to be feasible. However, high drainage costs make this investment unattractive to the farmer on a short term basis.

The farm costs and benefits of irrigation were also studied for the ALBS. With the exception of expansion in agroclimatic Zone C1, several development options considered were shown to be viable from an on-farm perspective. The findings suggested that intensification and extension of irrigation in Agroclimatic Zone A1 would show the highest return, followed by expansion in Zone A1.

The economics of deep plowing and subsoiling solonetzic nonirrigated and irrigated soils was examined. Under irrigation, shallow plowing without fertilizer appeared more economically beneficial than shallow plowing with fertilizer. Deep plowing alone provided greater economic benefits than applying fertilizer alone, and deep plowing plus fertilizer yielded the highest additional income of any of the alternatives. Subsoiling nonirrigated soils was found to have a much lower initial capital cost than deep plowing and therefore a lower yield increase required to break even. Subsoiling was therefore more economically attractive.

The resources section made a significant contribution to the economic component of the Farmland Assessment update of Alberta Municipal Affairs. Studies done included the impact of topography on farming operations, and the impact of location, obstacles, stones and trees on costs and therefore on the value of land. A separate study on the impact of well sites was also undertaken.

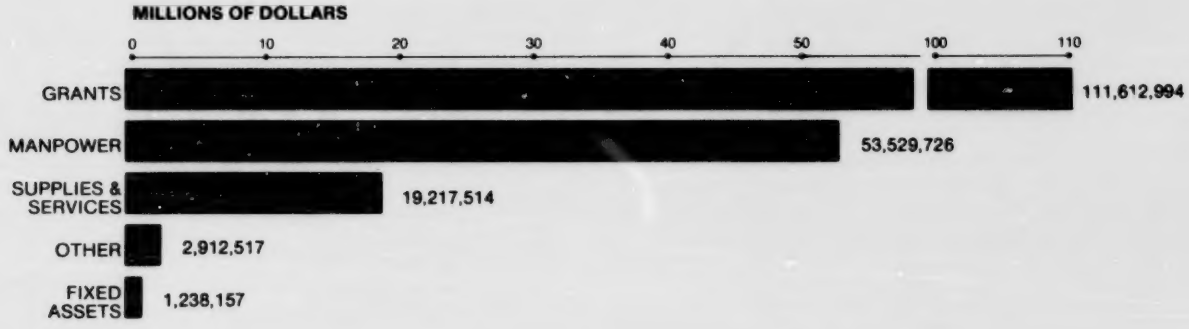
The section also participated in the review of the cost-sharing formula for irrigation rehabilitation and prepared two reports. These were the on-farm benefits of rehabilitation and a review of studies on the distribution of benefits from irrigation. Staff were also involved in studies of on-farm water quality, energy use in trucking, drainage of agricultural lands, drainage potential, and the treatment of aspen for use as a forage. Quarterly reports on farm real estate values showed a drop in farmland value of 5.6 per cent in 1983, the only recorded decrease in value since this project began in 1971.

# FINANCIAL SERVICES

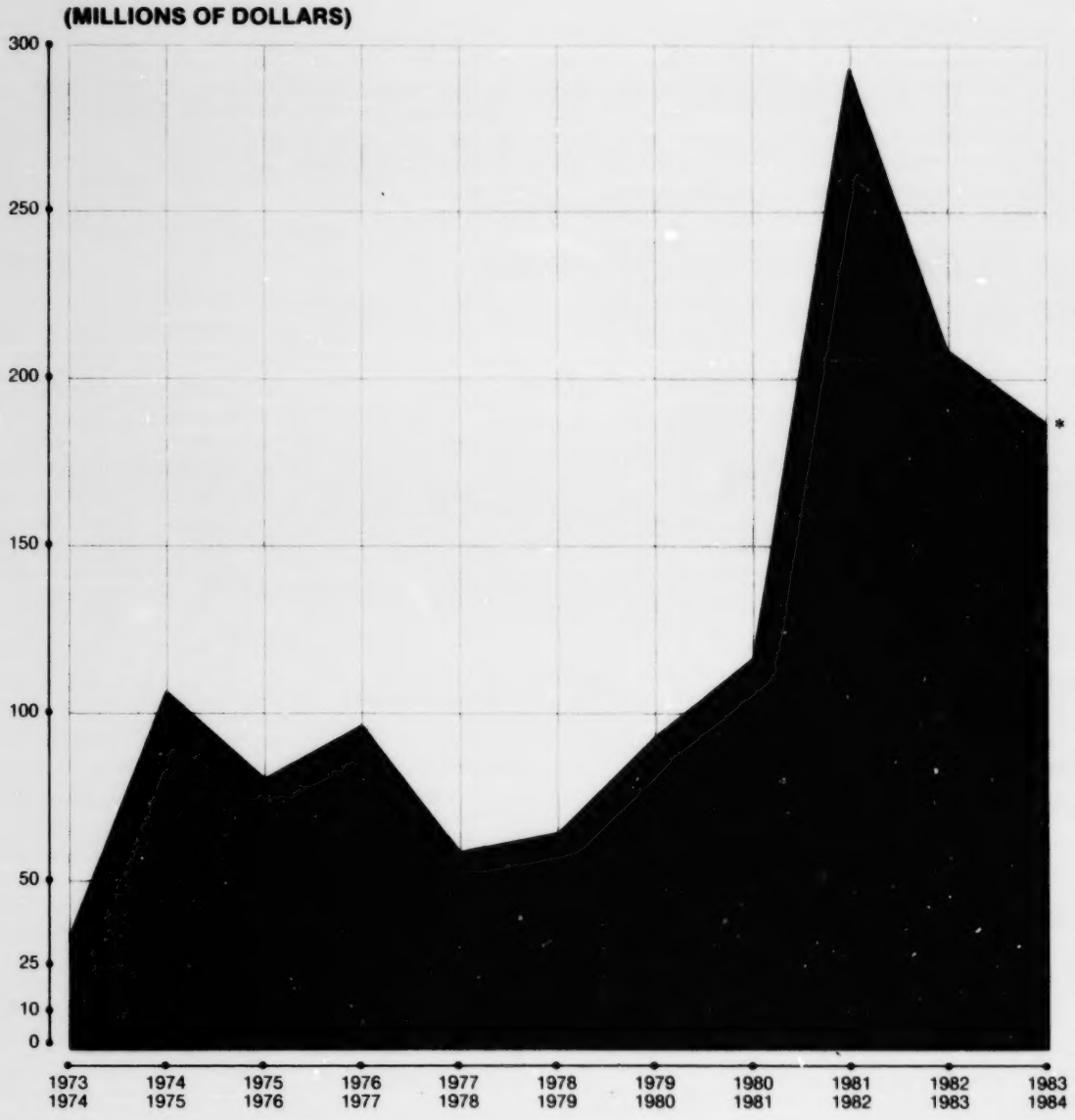
**Financial services was responsible for:**

- — the processing for payment of all expenditures incurred by the department
- — the collecting and depositing of all departmental revenue
- — the budgeting and other financial matters relating to the department
- — the operations of the departmental mailroom
- — the purchasing of all materials, supplies and equipment for the department
- — the processing of the department's payroll
- — the inventory control of the department.

## TABLE OF EXPENDITURE CONTROL GROUPS 1983/84 (UNAUDITED)

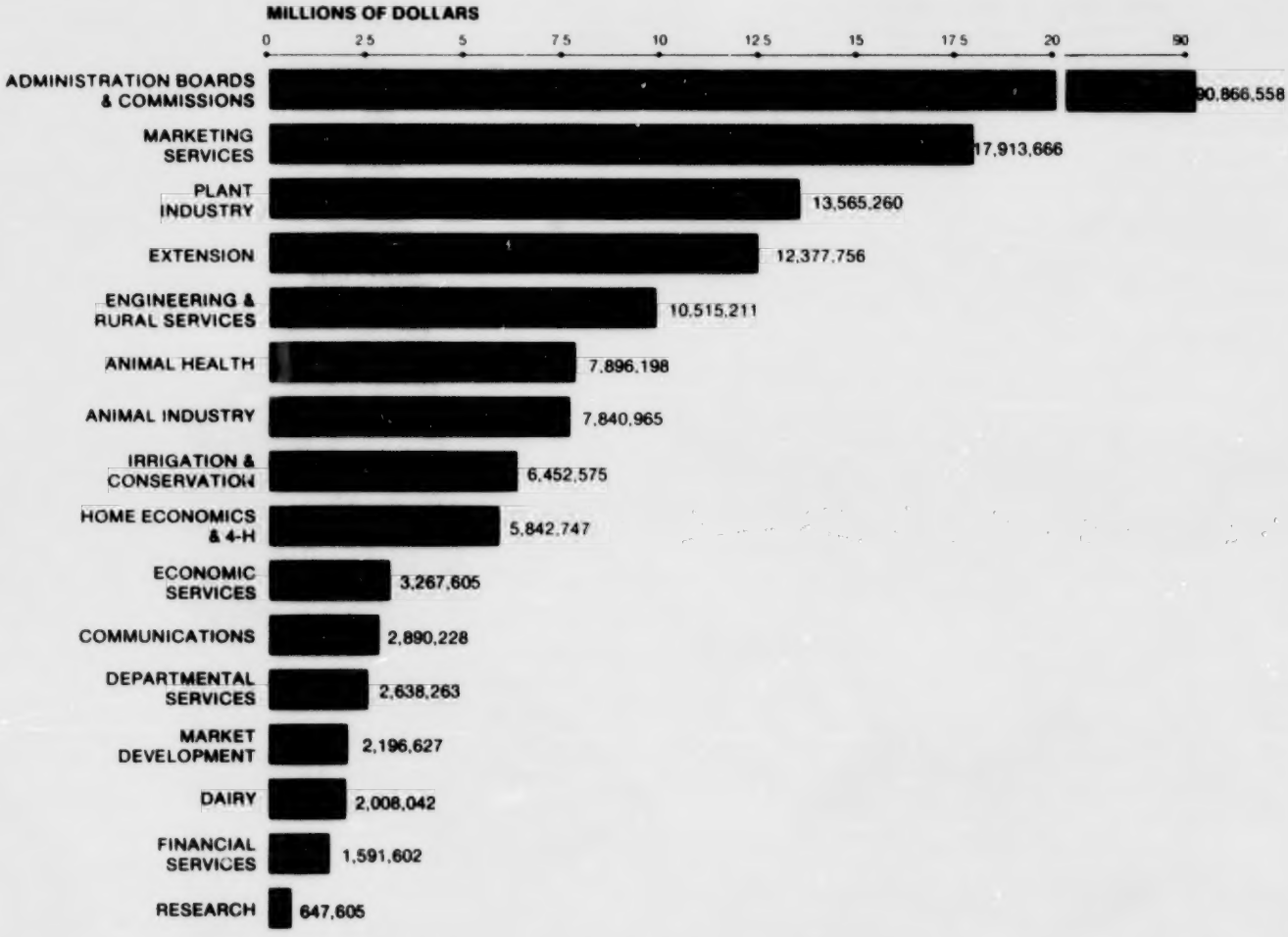


# DEPARTMENT OF AGRICULTURE EXPENDITURES 1973-1984




* 188,510,908
(unaudited)

# TABLE OF EXPENDITURES 1983/84 (UNAUDITED)



# PERSONNEL SERVICES

Personnel services developed and administered policies for the department in the areas of staff development, occupational health and safety, and personnel services.

Staff development provided the advisory service and coordination to ensure that job-related courses were available to all staff. Advice in organization development and the management process, including performance appraisal systems, was also provided by the section.

The section processed 12 applications for education leave, and 1,426 applications for training courses of which 553 were in-service, 500 out-service and 373 in-house.

Occupational health and safety concerns were investigated and resolved during the year. The section provided appropriate programs to meet the requirements of The Occupational Health and Safety Act, and assisted managers, joint worksite contacts and committees in ensuring that employees had a healthy and safe workplace. In addition, defensive driving and the St. John Ambulance first aid course were provided.

**Personnel Services:**
**Transactions for the Period April, 1983 to March 31, 1984**

| | |
|---|---|
| Number of competitions | 98 |
| Commencements | 78 |
| Terminations | 137 |
| Transfers | 23 |
| Reclassifications | 107 |
| Classification appeals - upheld | 1 |
| denied | 3 |
| pending | 0 |
| Updates | 78 |
| Position creations - permanent | 2 |
| temporary | 52 |

Personnel services administered wages and salaries, recruited and selected staff, classified positions and provided employee relations services to develop a high quality human resource base in the department.

Thirty permanent salaried positions were abolished effective April 1, 1984. This was done through the elimination of vacant positions and the privatization of the dairy herd improvement program.

The personnel committee which was responsible for administering the decentralized classification program for the bargaining unit, as well as for the opted out and excluded classes, met regularly to review classification requests. The committee also reviewed and implemented the newly created word processing series within the department.

A review of management classification was initiated to improve the evaluation criteria used in differentiating between class levels and sublevels, and to achieve equitable classification levels between comparable management positions within the department.

Staff assisted government negotiators on division 2 negotiations.

Two formal grievances lodged with the department were resolved.

**PERMANENT POSITIONS AS OF APRIL 1, 1983**

| | Clerical | Professional | Technical | Others | Total | % |
|---|---|---|---|---|---|---|
| Executive | 8 | 6 | — | — | 14 | 1.0 |
| Production Sector | 92 | 154 | 216 | 5 | 467 | 32.9 |
| Field Services Sector | 163 | 283 | 11 | — | 457 | 32.2 |
| Marketing Sector | 23 | 66 | 13 | — | 102 | 7.2 |
| Research and Resource Development Sector | 16 | 52 | 77 | 3 | 148 | 10.4 |
| Planning, Economics and Administration Sector | 72 | 89 | 6 | 10 | 177 | 12.5 |
| Surface Rights | 16 | 14 | — | — | 30 | 2.1 |
| Farmers' Advocate | 2 | 3 | — | — | 5 | 0.4 |
| Dairy Control Board | 7 | 4 | 3 | — | 14 | 1.0 |
| Marketing Council | 1 | 2 | — | — | 3 | 0.2 |
| Grain Commission | 2 | — | — | — | 2 | 0.1 |
| Department Totals | 402 | 673 | 326 | 18 | 1419 | |
| Percentages | 28.3 | 47.4 | 23.0 | 1.3 | | 100.0 |

OTHERS: duplicating equipment operators, audio-visual aids technicians, bindery equipment operators, stockkeepers, equipment operators, motion picture photographers, maintenance service workers, brand recorder, heavy duty mechanic, mobile drill operators.

# DEPARTMENTAL SERVICES

## Library

The library consisted of a main library in the J.G. O'Donoghue Building and 14 branch libraries. During the year a new branch library was set up in the Food Processing Development Centre in Leduc.

In addition to providing library services for department staff, the library assisted in meeting the agricultural information needs of the private sector.

A recent survey of the collection revealed a monograph collection of some 11,485 titles or about 16,268 volumes, 1,000 periodical titles of which 150 were newsletters, almost 15,000 reports and government publications and 7,900 documents in microfiche.

Library services increased in most categories, particularly in the number of books ordered and catalogued, interlibrary loans (nearly 3,000 requests were filled during the year), circulation services which increased by nearly 30 per cent to 10,651 times in 1983-84. The library provided a full range of reference services. Online information services continued to increase in number and scope. The library had access to almost 200 databases through the DIALOG Information Retrieval Service, MEDLARS and CAN/OLE.

In conjunction with the work of the Telidon subcommittee of the communications systems task force, the library developed and conducted Telidon/grassroots demonstration programs. The library also conducted general library orientations for 56 staff, presented a special research skills seminar to 18 department staff and held a two-day seminar for branch library staff.

The library maintained its participation in SCITECH, the automated library cataloguing system of the agriculture, environment and Alberta Research Council libraries, while continuing to derive most of its cataloguing from UTLAS. In 1983-34 the SCITECH group completed three manuals: *SCITECH On-line User's Manual, SCITECH Management Policy Manual* and *SCITECH Cataloguing Policy and Procedures Manual.*

The library participated in provincial government special employment programs in 1983-84. A duplicates exchange list was compiled and distributed to scientific libraries throughout Canada; a brochure identifying library services, staff and special collections was published; the general management section of the library was reviewed and upgraded; and a reference list of the management collections was distributed.

## Computer Services Branch

The computer services branch continued to provide maintenance and development of computerized systems within the department and oversee their optimal use.

Ongoing systems included dairy herd improvement, dairy farm inspection, fixed assets inventory, cattle brand retrieval, shelterbelt distribution, veterinary information retrieval, soil and feed testing analysis, departmental mailing labels, the departmental telephone directory, budget information and the apiculture registry.

Development continued on a soil information system (a joint federal-provincial effort), a herbicide recommendation system, a weed alert system, a reporting system for Farming for the Future, a financial planning system for market development, an agricultural processing industry directory system and a financial administration system.

The branch continued to provide service to department staff in the areas of statistical analysis, mapping and graphics, procurement of hardware and software, data entry, the administration of the electronic data processing central funds system and the management of word processing services.

The branch continued to provide administrative support to the Alberta small business and farm interest shielding program.

The branch participated on the communications systems task force in the continuing development of Alberta Agriculture programmed access to communications (AAPAC) to deliver computerized services to the agricultural community via an integrated network of computer devices and software.

The branch implemented the first phase of AAPAC, an electronic mail network connecting the J.G. O'Donoghue building, the O.S. Longman building, other Alberta Agriculture offices in Edmonton, the regional office buildings and the Agricultural Development Corporation building.

# COMMUNICATIONS SERVICES

The communications division provided information to the agricultural industry and the general public on Alberta Agriculture programs, policies, production and marketing.

The department's public relations programs were facilitated by providing organizational support and publicity for special events such as Agriculture Week and the Alberta Agriculture Hall of Fame. Producer groups and agricultural organizations also received assistance.

Production of federal-provincial media projects was maintained through participation in the Canadian Committee on Agricultural Communications.

During the year reorganization resulted in the educational programs branch being transferred to the field services division.

## Print Media Branch

The print media branch provided technical information on agriculture to farmers and others in the agriculture industry, and general information on agriculture and food to the general public. Staff of the department and associated boards and commissions were provided with editorial and publishing services, and advice and training in effective print communications.

*Agri-News*, a weekly news release package, provided 512 articles to 230 media facilities and 4,100 other recipients. Press kits were prepared for the Agriculture Hall of Fame and Agriculture Week, and distributed to the media throughout Alberta. Several seminars and workshops on writing for the media were conducted for department staff. Other press services provided were: advice on the effective use of the media, assistance with the editing and rewriting of columns and articles for field staff, and the production of special press releases. The newsletter *Extension Exchange* was edited and published by the branch.

Two hundred and sixty-four new and revised publications were written, designed, edited and printed for general distribution. This included 154 technical publications for farmers and their families. A monthly listing of these new and revised extension publications, *What's New in Publications*, was produced and sent to 6,100 persons in the agriculture industry. Assistance with the development and placement of the department's advertising was provided. Several department conferences were planned, promoted and organized with the assistance of the branch.

There were 363 printing jobs placed with commercial printers and supervised by branch editors. The in-house duplicating shop printed a total of 19.4 million pages for the 1,763 jobs it handled. This included 29 different newsletters and reports for regular distribution to the public.

More than 1,200 different publications on commercial farming, home economics and gardening were available to the public from the print media branch and field offices. There were 898,117 copies of publications distributed. The branch responded directly to 19,133 requests from the public and handled 4,355 orders from field offices for publications. All 4-H manuals and other club materials were reordered, stored and distributed by the branch.

Timely information on commercial farming was sent monthly to more than 50,000 readers by means of an insert in the Alberta edition of the *Country Guide* magazine. A reader survey was conducted and reported.

Staff graphic artists handled 140 design jobs for the department's printed and audio visual materials.

The department's Agriculture Week promotion was coordinated and presented by the branch.

# Broadcast Media Branch

*Call of the Land* celebrated its thirtieth year on the air in 1983. It was broadcast on 14 AM stations and several FM stations throughout Alberta to a daily listening audience of over 60,000.

Eighteen films and video productions were completed with six others in various stages of completion. The films covered topics such as soil erosion, pasture management, greenhouse production, pesticide safety and Hall of Fame vignettes. *Pest Wars* was aired on television and later won several awards for its outstanding production. Two agricultural marketing films were produced by Alberta filmmakers. They promoted Alberta's beef genetics and our primary and secondary agriculture industries.

Over 5,600 films, slide kits and video tapes were loaned from the film library. Department field staff, schools and 4-H clubs continued to be heavy users. Forty new films, video tapes and slides were added to the library. Ten slide/sound kits were produced for department specialists.

Broadcast media staff provided expertise at a communications workshop, and coordinated press relations for a number of department seminars and conferences.

# PRODUCTION

The sector undertook research, generated and transferred production technology, provided services and promoted practices to assist Alberta farm families and processors to maximize their financial returns.

The sector consisted of four divisions: animal health, dairy, animal and plant industry. The sector continued to be responsible for the administration of 18 pieces of legislation, and operated 14 widely decentralized laboratory, research and service centres in support of the industry. The sector cooperated with and financially supported joint projects with the Faculty of Agriculture and Forestry, University of Alberta; Alberta Agricultural Colleges, the Western College of Veterinary Medicine, the Veterinary Infectious Disease Organization and the Research Branch, Agriculture Canada.

## PLANT INDUSTRY DIVISION

The plant industry division consisted of five branches which relate to all aspects of crop production. The division provided a service in plant and related sciences aimed at achieving greater economic and aesthetic returns to those engaged in agriculture. This service was provided through extension, research and development, and problem diagnosis.

### Field Crops Branch

This branch was divided into three sections: cereal and oilseed crops, forage and special crops, and research.

The cereal and oilseed crops section prepared a canola production manual for the Canola Council of Canada for their "Grow with Canola" technology transfer program.

Two other publications *Varieties of Cereals and Oilseed Crops for Alberta* and *Barley Production in Alberta* were revised and distributed.

With the cooperation of district agriculturists and the regional crop production specialist, three surveys of top producers were carried out in region 1 on hard red spring wheat, irrigated soft white spring wheat, and winter wheat. The information obtained was in high demand and resulted in five producer meetings last year.

The forage and special crops section was involved mainly with extension work. Special emphasis was placed on pasture management and pasture improvement for forage as well as on special crops programs.

Extension activities were carried out by working with forage associations or by cooperating in programs with regional and district staff, educational institutions, etc.

The branch administered the cooperative seed cleaning plant program. A total of $1,463,000 was paid out for upgrading or replacement of the 77 plants which cleaned 29 million bushels. Plants were rebuilt at Rosebud and High Level.

Thirty-five meetings were held with producers where information on seed technology, production practices and varietal testing was presented.

The forage specialist spent one month in Heilongjiang province in China on a range improvement project as a part of the Alberta Heilongjiang production agreement.

Seven forage associations continued their demonstrations on rotational grazing and proved that getting more pounds of beef per acre was feasible. A specialized type of rotational grazing called the Savory Method was introduced into Alberta and tested.

The research section celebrated the tenth year of its feed grain breeding program by holding a public field day in conjunction with the federal research station in Lacombe. Approximately 600 visitors attended the field day.

The primary objectives of this section remained the production of new high-yielding varieties. Both Empress and Abee which were released from this program in 1982, found favor with producers. In addition, this section entered five winter wheats, five winter triticales, two spring barleys, and one spring triticale into cooperative trials for the first time last year.

The winter wheat and winter triticale breeding programs showed great potential in central Alberta with acceptable winter hardiness and disease resistance as well as yield. Significant gains have also been made in the area of spring triticale in identifying lines with reasonable sprouting resistance and good seed quality. A sizeable data base has been accumulated on all spring-sown cereal and oilseed crops.

## Crop Protection Branch

The crop protection branch carried out programs in weed control, entomology, plant pathology, apiculture, vertebrate pest control, sprayer technology and potato tuber production. The branch conducted coyote and rat control programs and worked with the central rabies committee controlling this disease in Alberta.

A new agricultural pests act received approval during the 1984 spring sitting of the legislative assembly.

Training and extension activities in the area of weed control continued to provide field staff with the updated technical information required. Courses were offered in the latest weed and brush control techniques. Three major weed fairs were also held in conjunction with the Canadian Agricultural Chemicals Association at Grande Prairie, Camrose and Red Deer.

There was a substantial increase in the enforcement of The Weed Control Act as landowners become less tolerant of their neighbor's weeds that can potentially affect them. The result has been more cooperative action to alleviate weed problems. Perennial weeds such as Canada thistle have become more obvious on cropland because conditions were not conducive to good overall weed control in 1983.

Public response to the weed control computer program demonstration at weed fairs was high but field implementation was limited by the lack of appropriate equipment in the district and regional offices.

The 1984 herbicide recommendations publication was revised and expanded to include insecticides and fungicides and was titled *Guide to Crop Production in Alberta - Part 1 - Chemical*. Twenty thousand copies were printed and distributed. The loose-leaf expanded version of this manual, for staff use only, was updated as required.

The knapweed eradication program continued in regions 1 and 2. All municipalities actively participated in the program and all known infestations were treated. The ultimate goal was the complete eradication of diffuse and spotted knapweed before they become established in Alberta. Eradication measures on nodding thistle within the city of Calgary were continued.

The weed control trial and demonstration opportunities program continued. Plots were established across the province in conjunction with the agricultural service boards. Other research trials investigated the control of tall buttercup, knotweed, and blueweed.

The weed alert program continued to gather information submitted by field staff. Maps and reports can be produced from the information available.

The entomology section was responsible for the control of a number of insect pests such as grasshoppers, cutworms, European corn borer, Hessian fly, sugar beet maggot, and forest tent caterpillars.

The warm dry spring of 1983 provided good conditions for egg hatch and nymph development of grasshoppers throughout the province. However, the late June rains allowed crops to outgrow much of the damage. The warm, long fall allowed for good egg laying and severe grasshopper infestations were anticipated in 1984.

The late June rains reduced any problem with cutworms, but the long open fall allowed for good egg laying. The European corn borer extended its range westward and was found to infest about 500 hectares. Hessian fly damage ranging from 5 - 30 per cent was found in the Wainwright area. The sugar beet root maggot infested 70 per cent of the crop in southern

Alberta. Forest tent caterpillars were on the decline in most areas but infestations were widespread throughout most of central Alberta.

Flea beetles were controlled very effectively with granular seed dressings and bertha armyworm populations remained low with very limited spraying in the Lethbridge, Edmonton and Grande Prairie areas.

The Athabasca River was treated twice with methoxychlor to control black fly populations.

In the area of apiculture, Alberta enjoyed its largest honey crop last year with a total production of over 25 million pounds. Statistics indicated that 67 per cent of Alberta beekeepers now winter a portion of their hives.

While American foulbrood continued to be a problem for the honey industry, most commercial beekeepers continued to improve their disease management. However, a survey indicated high levels of nosema disease, which may be the reason for the high rate of queen failure in package bees.

Extension activities continued to focus on the promotion of self-sufficiency within the beekeeping industry.

The use of propane bird-scare canons proved effective in repelling bears from apiary sites. The canons, however, required considerable maintenance. The testing of a light weight electric bear fence, and a homemade insulated polyethylene wintering wrap proved effective.

The plant pathology section reported that cereal diseases that were considered of minor importance several years ago caused significant economic losses in many areas in 1983, e.g. the septoria glume blotch of wheat which has become one of the major disease problems in North America. Genetic resistance to the pathogen has not been developed; seed treatments are ineffective, and no foliar fungicide is registered for control of this disease. In the irrigated regions of the province several diseases such as take all, striped rust, common root rot, powdery mildew, and black point were all favored by the short rotation of growing wheat after wheat.

Barley diseases, particularly scald and net blotch, were severe in the central western regions of the province.

Among the oilseed crops, seedling blight and sclerotinia stem rot were down last year. But alternaria black spot was severe in some north central areas, probably because of low sulfur soils.

Verticillium wilt of alfalfa continued to be confined to the irrigated regions, and the province continued to remain free of dutch elm disease and the beetle vectors of this disease.

The incidence of bacterial ring rot last year remained well below the previous four year average which may be attributed to the continuing use of certified seed by most table stock growers.

The regional crops laboratory at Fairview provided a diagnostic, survey and extension service for region 6 in entomology and plant pathology. A total of 543 specimens was processed for disease and insect problems among field crops, ornamentals, shelterbelts, vegetables and fruits.

The regional laboratory at Olds provided a similar service for region 2 and the western half of region 3. In this capacity, 431 diseases, 275 insects, and 131 weeds were processed. The main problems were winter injury, chemical injury, root rot, cereal leaf diseases, thrips, aphids, leaf miners, toadflax and scentless chamomile.

The problem wildlife section continued to be responsible for the supervision and coordination of three major programs: rat control, rabies suppression in skunks, and prevention and control of coyote depredation of livestock and poultry. Alberta was kept essentially free of Norway rats for the thirty-third consecutive year. Infestations were eradicated by the cooperative effort of residents and government personnel.

The program to prevent the spread of rabies in Alberta, primarily in skunks, continued under the direction of the central rabies control committee. No rabid skunks have been taken in the Alberta/Saskatchewan control zone since 1977. Within the province, skunks were destroyed in localized areas wherever rabies was found.

For the last 10 years, the department's stated objective for the coyote control program was to train producers to resolve their own coyote predation problems with assistance from municipal agriculture fieldmen. In 1984 the department reemphasized this objective and undertook the training of producers.

A number of articles were written on pesticides for several newspapers and magazines. These articles were intended to present a balanced view of pesticide issues in the province. Several seminars were also presented to target audiences such as students, teachers, and physicians, to inform them about current developments in the pesticide area and about the diagnosis and treatment of pesticide poisoning.

## Soils Branch

A number of changes were made to the agricultural lime freight assistance (ALFA) program. These included revision of assistance for marl separate from that of ground limestone, revision of a schedule of maximum allowable freight rates, a minimum quality standard for limestone and marl, and the need for lime as shown by a lime requirement test report.

Narrow cost-return margins resulted in increased interest in improving fertilizer efficiency, particularly as related to fertilizer placement, methods of handling and application (i.e. dual banding), cost of materials and rates of application.

Applied research activities on both dryland and irrigated land were directed toward developing soil test calibration data for new crops and varieties, and evaluating methods of fertilizer application.

Fertilizer research trials were carried out on most major irrigated crops. Nitrogen and phosphorus fertilizer trials made up most of the research. However, individual trials of potassium, sulfur, zinc and boron were included.

In dryland research trials, experiments were conducted to determine optimum rates of potassium fertilizer application, taking into account residual response from previous application, the effect of potassium sources and chloride on diseases of barley, and the effect of soil temperature and seeding date on the availability of soil potassium.

Farmer interest in deep ploughing and particularly deep ripping continued, as has the demand for information regarding their soil's suitability for deep tillage.

The Agricultural Soil and Feed Testing Laboratory was responsible for providing services in four major areas. Analysis and recommendations for soils, plants, and animal feeds were provided to the general public on a fee basis.

Diagnostic services were provided for the department staff to assist them in resolving production problems and to demonstrate improved technology.

This laboratory also analysed a number of samples supplied by soil, crop and animal specialists as well as researchers in the department and other public and private agencies. Agriculture Canada, the University of Alberta and private industry submitted over 60 per cent of the research samples tested.

## Alberta Tree Nursery and Horticulture Centre

During the spring of 1983, 2.3 million shelterbelt plants were distributed to over 7,000 landowners. These plants were provided for farmstead shelterbelts, roadside hedges, field shelterbelts, acreage plantings and townsite plantings. Another 23,000 mature trees were shipped to the various provincial parks.

During the winter months, 1.8 million hardwood cuttings of poplar and willow were produced. Six hundred thousand coniferous plants of spruce and pine were produced in the greenhouses.

Applied research projects were carried out. These projects dealt with lawn establishment and maintenance, vegetable testing and production, woody plant production and testing, seed germination and seeding practices, and weed control methods for nursery crops.

This centre also carried out numerous extension activities such as horticultural short courses and education and development programs for vegetable producers.

## Alberta Horticultural Research Center

The greenhouse energy program continued to offer general extension services to growers and industry on greenhouse energy conservation and on the use of reject heat. Controlled root temperature studies were continued and expanded to include several new crops. In the AHRC ornamentals trial, new introductions of

roses and perennials were tested and container trials for woody ornamentals were undertaken.

The vegetable program continued to emphasize field production through the evaluation of plant populations, transplanting methods and cultivar trials.

Evaluating potato cultivars in the prairie potato regional trials was continued. Various management practices were investigated as well.

With continued assistance from the Farming For The Future program, the special crops section focused on cultural, cultivar and adaptability trials of leguminous crops, forages, herbs and spices.

Selected herbicides were evaulated for vegetable, special and nursery crops. The effect of herbicide residues from previous years was studied in replanting trials.

The apiculture-entomology program included honeybee colony management and overwintering trials. Other areas of involvement were the monitoring of leaf miner populations in greenhouses, and the European corn borer survey and control trials.

The food processing and quality evaluation program continued to test new processes and products from fruit and vegetable crops. Chemical, sensory and processing studies were conducted on crops grown at AHRC and elsewhere.

Handling and storage studies on root crop vegetables, potatoes and nursery stock were continued in the post harvest physiology program.

The research component of the plant pathology program focused on studies of forage, greenhouse and pulse diseases and their control. The AHRC regional crop laboratory received approximately 1600 plant disease, insect and weed specimens for diagnosis in 1983.

# ANIMAL INDUSTRY DIVISION

## Beef Cattle and Sheep Branch

The beef cattle and sheep branch continued to provide production, marketing and financial information to the public with the objective of maintaining viable family farms and agribusiness in the province.

The branch emphasized its activities in animal reproduction, beef breeding, and nutrition. It continued with the Record of Performance (ROP) programs, the bull test station, the sheep ROP program, the warble control program, the artificial insemination (AI) data program, and the AI schools. The research and development program dealt with many of the problems producers faced.

Branch staff participated in field days, extension meetings, media presentations and responded to many other requests for service.

The semen evaluation laboratory handled 919 samples of semen from various species during the year. Samples were evaluated for total sperm count, percent motility, total mobile sperm, morphology and per cent with intact acrosomes.

In 1983-84, 210 producers completed the federal-provincial beef ROP program to the weaning phase. Revisions to the original beef ROP program introduced in 1981 were very unpopular and a second revision was released early in 1984 which has been more widely accepted.

The beef cattle breeding section provided municipalities with technicians under the ROP weight supervision program to assist farmers in recording fall weaning weights and spring yearling weights. Seventeen municipal governments took advantage of this program in the 1983-84 fiscal year. A total of 20,000 calves from 342 herds was supervised in the fall of 1983. Approximately two-thirds of the calves were weighed again in the spring of 1984.

Nineteen groups conducted central bull test stations in 1983-84. Approximately 1725 bulls were evaluated for growth rate from weaning to approximately one year of age. Twelve stations took advantage of branch services of weight supervision and calculating, processing and distributing test station results.

The sheep ROP home test enabled producers to evaluate whether, ram and ewe lamb rates of gain from birth to 50 and 100 days of age. A ewe index based on productivity was also provided.

Purebred enrolments have increased over the past five years, while the number of commercial breeders enrolled on the program has decreased, leaving the total in 1983 at 56.

The Alberta sheep ROP test station completed its ninth year of operation in 1983 at the permanent facility on Olds College campus. Thirty-eight breeders entered 173 rams at the station.

The Alberta young sire proving program provided a grant of up to $750 to owners of bulls which completed a progeny test conducted by a recognized testing agency. Thirteen bulls completed tests in 1983 and three testing agencies were awarded total grants of $9,750.

A continued reduction in the number of cattle infested with warbles occurred as a result of the branch's warble control program. Agriculture Canada health inspectors recorded that only 5 per cent of carcasses were infested in 1983 from February through May. This compared with 7 per cent in 1982, 14 per cent in 1980, and 44 per cent in 1968 before the warble control program began. The department shares 60 per cent of the warble control program costs with local governments; the latter are responsible for monitoring sources of infestation at the local level and enforcing the regulations.

Agricultural service boards received grants equal to 60 per cent of the costs of the programs they undertook to promote improved livestock production practices in their districts. This involved the purchase of livestock equipment for rent or loan to producers, or setting up projects to demonstrate new products or practices to improve livestock production.

Alberta livestock breeders received assistance to exhibit their stock at major international class exhibitions outside of the province. In 1983-84, 304 exhibitors showed 1150 animals in six international class shows.

The ration advisory service and feed testing program continued to provide production information directly to livestock producers and feed companies in Alberta.

The number of requests for detailed ration recommendations for samples submitted to the Agricultural Soil and Feed Testing Laboratory (ASFTL) was 427 in 1983-84 compared with 413 in 1982-83 and 367 in 1981-82.

On a fiscal year basis 21,022 samples were processed at the ASFTL. Out of this total, 20 per cent were regular samples, 11 per cent were diagnostic (demonstration) samples and 69 per cent were research samples. The numbers of regular and demonstration samples were higher than the year before. The number of research samples increased by 67 per cent.

The AI data program introduced in 1980 continued with a grant of $1 being paid for each insemination reported by a licensed inseminating business. A total of $27,256 was paid to 37 participating businesses during the year.

The branch continued to support AI schools at the three agricultural colleges with a grant of $100 for each student completing a course in dairy or beef AI; $15,900 was paid in 1983-84 to the 230 participants in training courses.

The branch's involvement in research and development increased in 1983-84. Research projects involved growth implants, insecticidal eartags, reproductive studies, nutrition and management, forage, preconditioning and preimmunization and others.

## Horse Industry Branch

Although markets for horses were severely depressed, interest in horse activities increased.

The branch provided staff or financial assistance for approximately 40 educational programs throughout the province. Staff offered extension services to horse owners through office visits, farm calls, correspondence, telephone, technical bulletins and media. Special extension projects in 1983 included the coordination of the Alberta Horse Breeders conference, and a film on advanced horse training.

The horse improvement program consisted of 45 special classes for participating light horse and draft horse breeders in the province. During 1983, 600 horses were appraised from 14 breeds.

The branch assisted marketing staff and breed associations in developing promotional and marketing projects. The branch assisted with the coordination of Equitana North America, a trade fair for horses and horse-related projects.

In July assistance was provided to a film crew from a West German television station who were making a film for distribution throughout Europe on western riding.

The travel assistance program provided a grant to owners of horses participating in national or international breed championship shows held outside the province. In 1983 $13,050 were provided for 33 horses from five breeds.

As a service to veterinarians and horse breeders, the branch in cooperation with Olds College conducted potential fertility examinations on 41 stallions during 1983.

The horse industry branch continued to provide leadership in horse research. During 1983 two projects on horse nutrition were conducted at Lakeside Research in Brooks. The branch also assisted with projects conducted at Sky West Farms, the University of Alberta, Olds College, and the Western College of Veterinary Medicine in Saskatoon.

Another service the branch continued to offer to provincial horse organizations was that of drug testing at major horse shows. During 1983-84, 268 horses were tested over 31 days.

## Pork Industry Branch

The pork industry branch continued to assist pork producers in the province by making production, marketing and financial information available as required.

The provincial swine extension program was mainly carried out by the four regional swine specialists located at Lethbridge, Red Deer, Vermilion and Barrhead. The pork industry branch coordinated provincial extension projects, delivering these to producers through the provincial specialists, regional swine specialists and the district extension staff.

Over 25 extension meetings were organized and conducted by branch staff, regional swine specialists and the monogastric nutritionist. Staff helped to organize and carry out the Alberta Pork Congress with 3000 attending, the Alberta Pork seminar with 100 present, the in-service training course for 45 persons and other regional and provincial meetings and conferences.

The swine specialists and branch staff made farm calls and conducted office interviews with swine producers and others, answering questions and solving problems in nutrition, engineering, herd health, finance, breeding management and other areas. AI and ROP programs were given information as requested, as was the Agricultural Development Corporation re loan information.

Seventeen new fact sheets were prepared for the Pork Industry Handbook and distributed to a mailing list of 1400. Authors included branch staff, swine specialists, other department staff, University of Alberta staff and others. A research review column and another column answering questions on swine nutrition were produced for each issue of the quarterly Western Hog Journal.

## Poultry Branch

The branch continued to develop and administer regulations, policies and programs relative to the industry under The Livestock and Livestock Products Act.

Poultry branch programs were related to increasing poultry production, improving efficiency and thus farm income, and keeping poultry products competitive with other protein sources.

Research work continued on the grading of carcasses of roaster chickens to help increase returns to producers.

Poultry health programs were undertaken to prevent and control poultry diseases, and to safeguard public health. The branch continued to monitor all breeder flocks and hatcheries, with emphasis on salmonella detection and reduction in cooperation with the Animal Health Division.

Flocks were monitored for infectious laryngotracheitis (ILT) and all ILT outbreaks were visited by branch staff.

The pullorum/typhoid eradication program continued, and Alberta was declared salmonella pullorum/typhoid free in 1983.

In addition to the branch's regular cost study work, the poultry branch staff undertook a cost data study with the production economics branch aimed at determining actual provincial costs as opposed to national costs.

Staff continued to provide an extension service to all poultry producers in the province. Nine hundred and twenty five farms calls were made and 162 to allied trades.

Staff organized the poultry industry conference, a poultry serviceman's workshop, and several small flock seminars.

## Regulatory Services and Feeder Associations Branch

The main role of the regulatory services and feeder associations branch was the administration of certain acts and their regulations. The acts and regulations were designed to protect livestock producers by providing the following:

- branch registration
- brand inspection service
- licensing and bonding of livestock dealers and agents
- licensing of stockyards and stockyard operators
- protection of lands and agricultural products from livestock running at large
- investigations of fraudulent trade practices concerning livestock
- a means whereby members of feeder associations may acquire livestock for feeding or finishing.

The feeder association section administered The Feeder Associations Guarantee Act which enabled members of feeder associations to acquire livestock for feeding or finishing. During the year 33 feeder associations operated under the act.

During the fiscal year $32,585,619 worth of credit was used to purchase 75,917 cattle and 5,895 sheep by 33 feeder associations. The amount outstanding as of August 31, 1983 was $16,812,000.

Under The Stray Animals Act, 1,178 head of livestock were impounded during the year. One thousand and forty-two head were returned to the rightful owners after they paid the costs of capture, transportation and maintenance. The balance, 136 head, were sold by public auction.

A total of 47 livestock markets and 61 livestock assembly stations were in operation at year end.

There were 912 livestock dealers and agents compared with 879 in 1982. A total of 15 claims was received against three livestock dealers' bonds during the year.

The number of head of cattle and horses inspected through markets and on export was 3,044,665 a decrease of 25,554 head from 1982.

Seven well attended branding demonstrations were conducted.

# DAIRY DIVISION

The dairy division assisted dairy producers and processors through inspection, consultation and demonstration with the objective of producing legal, safe and wholesome dairy products economically. The division also encouraged the industry to manufacture new dairy products in an effort to encourage value-added processing.

Producer management programs, e.g., the dairy herd improvement programs, assisted producers in developing and maintaining economic production units.

Privatization of DHI field services was a priority of the dairy division in 1983. Assistance was provided to the Alberta Milk Producers' Association Ltd., ensuring an orderly transfer of staff and responsibilities from government to the Alberta Milk Recording Board.

# Dairy Processing Branch

Dairy specialists inspected each dairy manufacturing plant regularly, collected samples for laboratory analysis, and submitted the results to the branch, the respective plants, the provincial Board of Health and appropriate local health units.

Unsatisfactory reports were followed up by special inspections and detailed discussions with plant personnel.

Virtually all freshly processed milk from plants in Alberta complied with Board of Health standards, and over 78 per cent of products sampled at processing plants exceeded these standards. Increased emphasis was placed on maintaining quality up to and beyond the "pull date" or "best before" date on the package. Fluid and cultured products were tested microbiologically following seven days' storage in an environment designed to simulate conditions in a typical household.

Annual plant inspections were conducted jointly by provincial and federal inspectors. Each plant received a numerical rating thus enabling an intra-and inter-provincial comparison. Alberta's provincial rating remained the highest in Canada. The following table illustrates the high standards in Alberta dairy plants for the last three years.

**ALBERTA DAIRY PLANT RATINGS COMPARED WITH THE NATIONAL RATINGS**

| | 1981 | 1982 | 1983 |
|---|---|---|---|
| National average plant score | 81.1 | 82.4 | 82.2 |
| Alberta average plant score | 85.6 | 88.1 | 88.0 |
| Lowest scoring plant in Alberta | 70.3 | 77.1 | 72.7 |
| Highest scoring plant in Alberta | 99.4 | 99.9 | 99.4 |

The certification of all dairy plant workers in Alberta continued at a high level because of continued efforts by dairy specialists and a substantially lower level of plant employee turnover.

Raw milk supplied to dairy plants was examined for sediment, off-flavors, and specific types of organisms that could affect keeping quality.

Sampling and testing of bulk milk received at Alberta dairy plants continued to be of major concern with special attention paid to preventing milk containing antibiotics or inhibitors from entering the system.

Bulk milk grader training and surveillance were increased.

Dairy manufacturing plant licences issued in 1983 totalled 37, compared with 35 in 1982.

The centralization of fluid milk processing with one more small fluid milk plant converting to a depot, continued. Surplus fluid milk focused attention on industrial milk processing, especially cheese manufacture.

During 1983 three cheese plants were upgraded and a new process cheese factory began operation in September.

# Dairy Farm Inspection Branch

Inspection and advisory services were provided to dairymen concerning milk quality, milk production, improvement and upgrading of milking facilities and equipment.

The dairy farm inspection branch continued to provide inspection services on behalf of Alberta Agriculture Development Corporation relating to the dairy development program.

The graduated entry program continued but with no additional fluid quota allotted. Producers did receive their third allotments as previously committed.

Twenty-one producers who applied and met quality and premise requirements had their names added to a waiting list.

Milk quality continued to improve during 1983 as a result of milk grade and price program and more effective utilization of staff.

Of the 1,689 producers as of March 31, 1984, 1,437 were fluid and 252 were industrial. This represented a net loss of 76 producers.

The milk grade and price program, which operated for a 12-month period ending March 31, 1984, recorded 166 standard plate count violations, 66 freezing point violations and 110 inhibitor violations, totalling 342 violations, 165 less than in 1982-83. Twenty-nine loads of milk were destroyed because of inhibitor contamination. Funds collected from producer grade deductions were used to compensate innocent producers whose milk was lost, and to bulk milk graders for the time taken to confirm suspicious loads. The remainder was redistributed to milk producers on a monthly basis via the Alberta Dairy Control Board.

A concerted effort was made to identify producers who were experiencing mastitis problems as measured by somatic cell counts. A continued effort in this area can be expected. Fluid production averaged 331,701/mL while industrial production averaged 458,118/mL.

Upgrading the status of industrial producers to fluid standards continued. Two producer cooperatives have implemented programs to encourage upgrading of their premises.

## Dairy Farm Production Branch

The dairy farm production branch provided leadership in the organization and delivery of extension programs in 1983.

Information and advisory services were provided concerning somatic cell counts as an indicator of udder health in cows.

The branch coordinated and monitored an individual cow somatic cell counting pilot project in 1983. Sixty-two herds in Alberta participated in the project for the year ending March 31, 1984. Participating herds reduced somatic cell counts by approximately 20 per cent.

Fees for participation in the program were set at $2 per cow per year which covered laboratory operating costs.

Assistance was provided in organizing and presenting information to dairy farmers.

Production Plus Club activities were expanded. Sixteen clubs with approximately 60 participants were active during the year. Production levels were used to monitor progress.

An Alberta dairy production course was developed during the year.

Two dairy management specialists were employed on a temporary basis to provide financial and production management advisory services to producers.

The second annual Alberta dairy seminar was held at Banff, jointly sponsored by the University of Alberta, Alberta Milk Producers' Association Ltd. and Alberta Agriculture.

The branch program dealing with milking equipment evaluation and approval of installation continued. Milking equipment installers voluntarily participated in a week-long stainless steel welding course developed in cooperation with the Southern Alberta Institute of Technology, Calgary.

Stray voltage continued to be a concern in milking facilities. The milking equipment testing program evaluated and looked for the origin of stray voltage problems.

An on-farm demonstration project was developed for whey utilization and disposal. Increased processor interest permitted greater use of whey as a dairy cattle feed.

The *Alberta Dairy Producer* newsletter was issued monthly.

## Dairy Cattle Improvement Branch

The dairy cattle improvement branch administered the Dairy Herd Improvement (DHI) program which serviced 781 (743*) producers, 73 (66*) of them on the supervised component of the DHI program. Approximately 64,100 cows were enrolled on DHI in 1983, an increase of 7 per cent. In addition, 9,133 cows were tested on the federal record of performance (ROP) program in Alberta. Two-thirds of the commercial dairy cattle population in Alberta were enrolled on a milk recording program during 1983-84 and tested herds produced more than 70 per cent of the fluid milk produced in the province.

* *indicates statistics for the previous year, 1982-83.*

Average milk production increased to a record of 6,180 kg (13,625 lb) in DHI herds, approximately 2,000 kg (4,400 lb) more than the average of all milk cows in the province. Average milk production in the supervised DHI herds increased slightly to a record 7,016 kg (15,467 lb) per cow.

The National Identification Program (NIP), a genetic recovery program for grade cattle, continued as a priority field service with 15,770 heifer calves identified during the year. For the third consecutive year, more than 85 per cent carried positive identification of one or more generations of breeding by registered purebred sires, thus increasing substantially the commercial value of the Alberta dairy herd.

The Alberta Milk Producers' Association, acting on behalf of the Alberta Milk Recording Committee, worked closely with government in the development of a proposal for the privatization of the DHI field services. An agreement was reached establishing an Alberta Milk Recording Board with responsibilities for the delivery of the DHI field services. Fees were increased from $4 per cow tested to $5 for the owner-sampler program and from $12 to $16 for the more labor intensive supervised DHI program.

Branch staff continued to provide herd owners with breeding, feeding and production management information upon which to make effective management decisions related to increasing efficiency of milk production in Alberta. DHI workshops and dairy seminars were held throughout the province to instruct and assist dairymen in putting their records to work. Other major projects included participation in the development of a new milk recording computer system with other interested milk recording agencies in Canada, and a pilot project of somatic cell counting for mastitis detection.

Branch staff continued to work closely with the Dairy Control Board in policy formulation and with producers with respect to dairy board extension material.

The division collected and recorded statistics on Alberta manufactured products for the Alberta Bureau of Statistics and Statistics Canada.

## The Alberta Cheese Specialist's Report

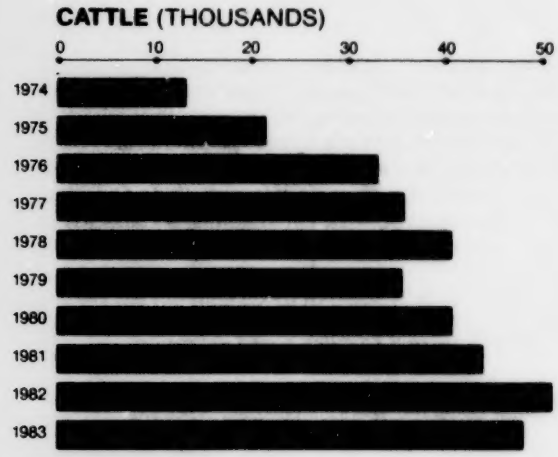
Major activities of the provincial cheese specialist included continued updating of starter culture technology by introducing modern systems into Alberta's two largest cheese factories. The incorporation of the latest culture methods in the manufacture of products other than cheese, and the evaluation and selection of equipment for the new processed cheese plant at Bashaw were other activities.

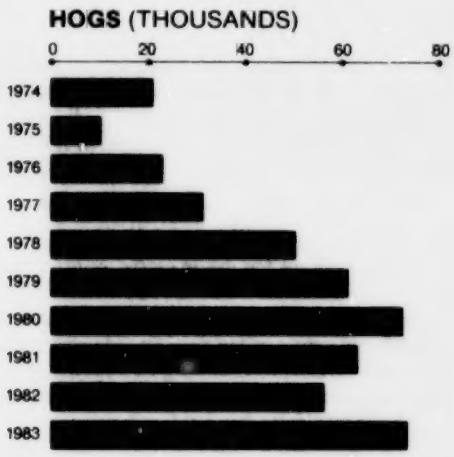
# ANIMAL HEALTH DIVISION

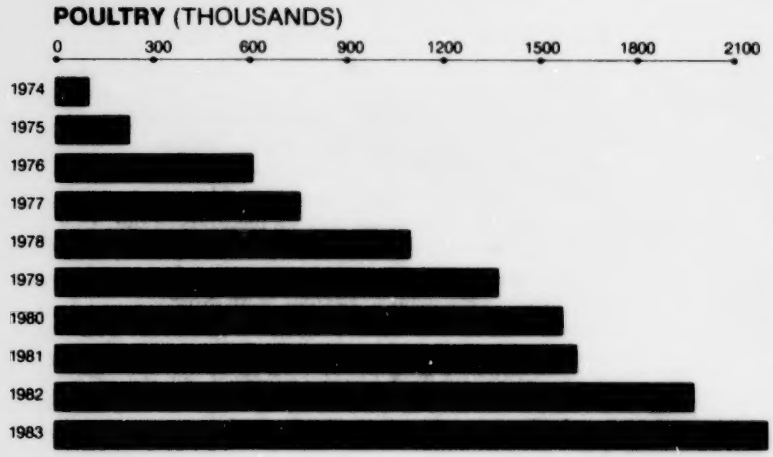
The division's programs and services provided disease diagnostic results, inspection, consultation and extension information to help improve disease control, agricultural production and production of safe, quality products. Diagnostic laboratories provided specialized post mortem and other analytical services to veterinary practitioners and producers in order to assist in the diagnosis of animal diseases. Improved herd management systems were promoted to help prevent and control disease problems and improve production. Inspection of animals at auction markets and at community pasture entry points helped to reduce the transmission of disease. Meat inspection at provincially licensed abattoirs resulted in the detection and removal of diseased or contaminated meat from food supplies.

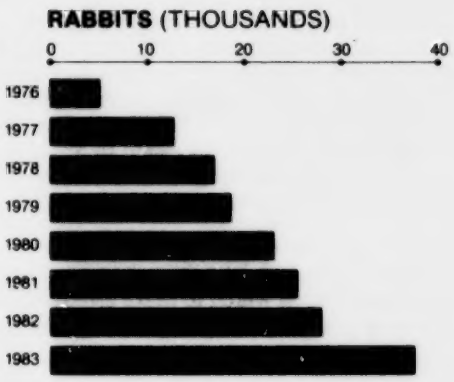
Pasteurization of milk continued to provide protection to consumers from diseases such as salmonellosis which occurred in several dairy herds in the province. Producers and veterinary practitioners were assisted in apply ing control measures to help prevent further salmonella infections in the dairy herds. In addition, continued emphasis was placed on poultry production systems in order to reduce the occurrence of salmonella infections.

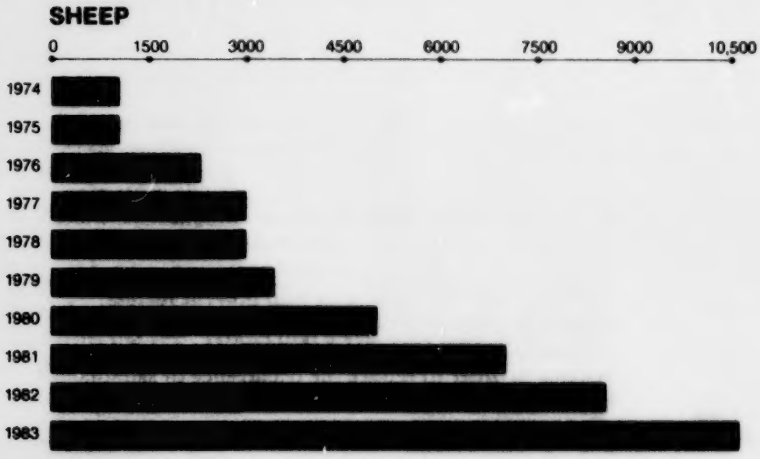
# LIVESTOCK INSPECTED 1983-84



No cases of brucellosis were diagnosed in the laboratories during the year. As a result of the federal brucellosis control program, Alberta is expected to be declared brucellosis free in 1984.

Reduction of skunk populations in rabies infected areas continued to have very effective results. Alberta is the only area in North America that has been successful in eliminating rabies from a skunk population.

Several division staff participated in the Energy Resource Conservation Board hearings on the gas well blowout that occurred near Lodgepole.

The summer work experience program for veterinary students continued to operate under the Summer Temporary Employment Program and provided assistance to practitioners in hiring veterinary students.

The departmental grant for the operations of the Alberta Society for the Prevention of Cruelty to Animals was slightly increased in 1983.

Work continued during the year with the Alberta Veterinary Medical Association in order to prepare a new veterinary profession act.

## Meat Hygiene Branch

During 1983 the meat hygiene branch employed two supervisors, five regional supervisors and 35 inspectors on a full-time basis. Eighteen part time inspectors and 86 practising veterinarians were employed on a part-time basis.

Inspection was provided for 75 red meat plants, 7 poultry plants, 74 Hutterite Colonies processing poultry, 1 rabbit plant and 1 secondary processor.

Livestock inspected during the year included 43,900 cattle, 61,654 hogs, 9,794 sheep, 1,085 goats, 95 buffalo, 36,370 rabbits, 84,888 ducks, geese and turkeys, 1,874,339 broiler chickens and 276,213 fowl.

Condemnations for the year were approximately 1 per cent for cattle, .77 per cent for hogs and 2 per cent for other species. In addition, 53,532 portions of animals were condemned.

Enforcement activities continued during the year with approximately 90 possible violations being investigated. Most were persuaded to cease their activity and four charges were laid against private citizens: three were convicted and one is still before the courts.

## Preventive Medicine Branch

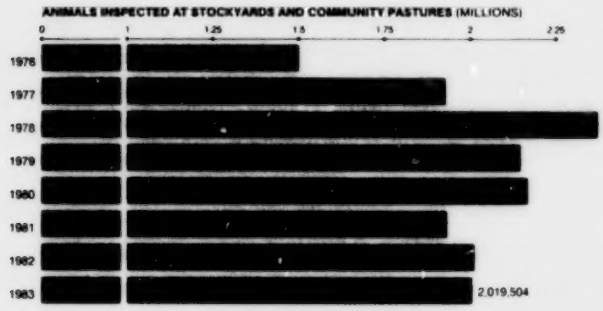
Major responsibilities continued to be the administration of legislated animal health programs, the prevention and control of disease in livestock, the safeguarding of human health by control of certain designated diseases and the enforcement of regulations for the sale of livestock medicines. Herd health management and improved production techniques were emphasized to livestock producers and veterinarians. Over 100 veterinarians in private practices throughout Alberta were involved in auction market inspections, community pasture inspections, swine herd health visits, disease investigations and extension programs.

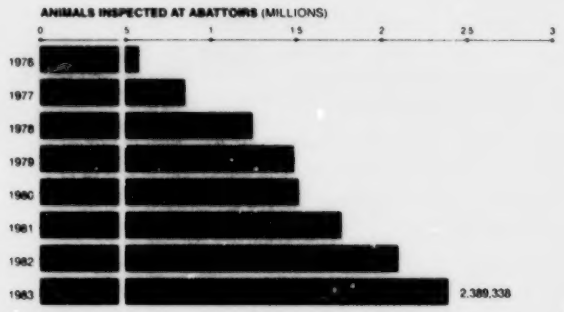
Livestock production support in the form of technology transfer continued to be a major activity of the branch. Members of the branch were active in extension presentations to livestock producers. Many local extension meetings were addressed by veterinary practitioners using audio-visual materials provided by the branch. Delivery of the animal health home study course in regions 3 and 4 was completed this year. Branch film and slide kits were used frequently during the year. Fact sheets, articles and news releases were prepared on several occasions for a wide variety of farm publications.

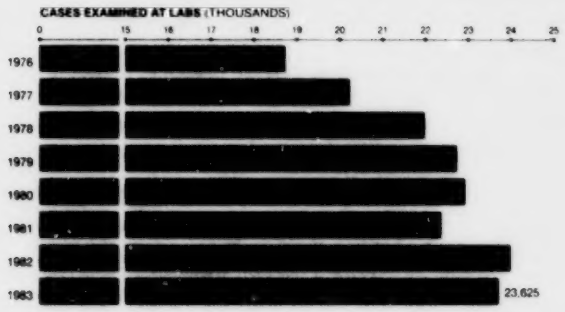
Designated diseases and other economically important diseases of livestock were monitored by the epidemiology section. Disease prevalence surveys were conducted for several diseases to provide information to producers. Detailed disease investigations by members of the branch were conducted, most frequently for dairy, beef and swine operations, to assist livestock producers in reducing disease losses and to improve their productivity.

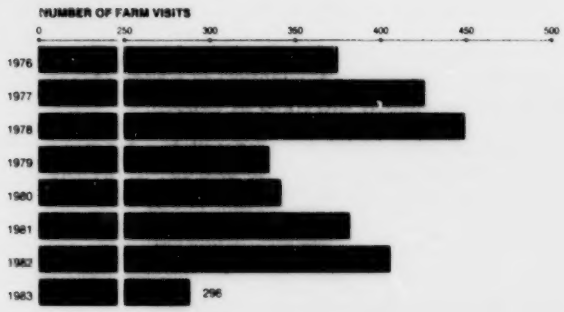
The swine herd health program showed a significant increase in enrolment as a result of continued producer interest and the willingness of veterinary practitioners to participate. The health of both seedstock and commercial herds was monitored by regular veterinary

# ANIMAL HEALTH DIVISION
# SERVICES PROVIDED



visits and head and lung examinations were undertaken for respiratory diseases. Snout and lung scores for enrolled seedstock herds were published semi-annually to aid commercial swine producers in the selection of replacement breeding stock suitable for their herds.

All livestock sold at auction markets or entering community pastures in Alberta were subjected to a health inspection with the aim of reducing the spread of disease and improving the health and productivity of the herds. Animals that died while on community pastures were examined by practising veterinarians.

Livestock medicine outlets were licensed and regularly inspected to ensure regulations were met and to prevent animal health product residues in human foods. A study into livestock medicine sales in Alberta was completed.

The provincially-owned veterinary clinics at Edson, High Prairie and Fairview continued to provide full service to animal owners, and were self supporting. Similar clinics at Valleyview, Manning and Fort Vermilion required additional support in order to retain the veterinarians and service to the public.

The Alberta certified preconditioned feeder program was designed to improve the health status of beef calves being sold, their marketability, and the returns to cow-calf producers. Although participation declined from 1982-83 levels, studies revealed that preconditioning increased both the selling weight and price of the calves.

Several research projects were conducted by the branch to help generate production information for Alberta farmers. The bovine respiratory disease project, funded by Farming for the Future, was operated as a joint project between Alberta Agriculture and the Veterinary Infectious Disease Organization, Saskatoon. A trial to assess the efficacy of porcine parvovirus vaccine was commenced in eight herds in southern Alberta, with the cooperation of the local veterinarian. Trials to assess the effect of preconditioning on the performance and economics of production of cows and calves before sale and following sale in the feedlot were continued.

## Regional Laboratories Branch

The regional laboratories branch was responsible for the operations of diagnostic laboratories located at Airdrie, Lethbridge and Fairview. These laboratories provided a diagnostic service to livestock and poultry producers and their veterinarians from Red Deer south and from Valleyview north. As well, consultation on matters of disease and its prevention was provided to livestock and poultry producers and their veterinarians. Field trips were made to investigate unusual or serious disease problems. Staff veterinarians participated in extension programs related to animal health concerns.

Veterinarians from the Airdrie laboratory cooperated with the Brooks Wildlife Centre in a disease prevention and control program for the centre which proved successful.

Veterinarians at the Lethbridge laboratory cooperated with fish and wildlife personnel investigating health problems in fish at the Allison Creek brood trout farm.

The Airdrie laboratory was also involved in a study of bovine respiratory disease with particular emphasis on interstitial pneumonia.

The Fairview laboratory provided instruction to animal health technician students of Fairview College and the Northern Alberta Institue of Technology. The Airdrie laboratory provided it to students from Olds College.

Personnel of the Airdrie laboratory cooperated with the pathology branch, preventive medicine branch and the animal industry semen laboratory in a study of methods to evaluate the fertility of male foxes as infertility continued to be a major problem in the production of foxes by commercial fur farms.

## Reference Laboratories Branch

The primary responsibility of the branch was to provide an efficient and accurate laboratory support service for the diagnosis of infectious diseases and noninfectious conditions such as nutritional deficiencies and poisonings. Special services such as virology, electron microscopy, and chemical analysis were provided.

A secondary responsibility was to develop faster and more accurate methods of disease diagnosis. A consultation service was provided to producers, veterinarians, and other agencies.

A total of 75,021 specimens was processed in various sections, which represented a five per cent decrease from the previous year.

# Pathology Branch

The pathology branch offered producers support by diagnosing animal diseases, assessing the importance of the disease to production or human safety, and transferred information to aid in disease control and prevention. Diagnostic assistance was provided to primary livestock and poultry producers, their veterinarians, other government departments and the public in central Alberta. Consultation on specific disease diagnoses or herd problems and on disease assessment and prevention was provided in writing, through telephone conversations and by personal interviews.

The diagnostic service helped identify diseases and their causes, reduced losses from disease and consequently minimized the spread of disease. Laboratory post mortem examinations supported by in depth, rapid testing often provided the first indication of disease to a producer or to the province. This information was used to educate veterinarians and the public in early recognition of these diseases. Pathology services were also utilized by the University of Alberta and other academic institutions in the areas of swine, cattle, poultry, game ranching, laboratory animals and specific research experiments requiring pathology evaluation.

In 1983-84 the branch continued to utilize its records of submission and on-farm evaluations to investigate unique problems such as the Lodgepole blowout. Field trips were conducted by pathology branch staff to assess unusual or serious problems in detail or to follow up laboratory diagnostic efforts. Applied research projects to investigate new diagnostic techniques were carried out.

The branch cooperated with other government departments utilizing diagnostic pathology, e.g., the fish disease laboratory which shares services and manpower provided by both Energy and Natural Resources and Agriculture. A die-off of bighorn sheep in Alberta, B.C. and Montana also precipitated a cooperative effort by Alberta Energy and Natural Resources, Alberta Agriculture, Parks Canada and United States workers. There was considerable concern in this case that the disease might affect domestic sheep grazing in the same area.

The branch was divided into the animal, avian and reproduction sections. The animal section dealt with all mammalian species, provided service predominantly through the veterinary profession by amplifying the results of detailed post mortem findings and tabulating disease statistics. The section's services were concerned primarily with food-producing animals which had been provided for post mortem examination, interpreting laboratory analyses and providing information on disease control, prevention, or animal salvage. All reports to producers and their veterinarians were written and confidential. Results were tabulated retrospectively and utilized for general information, retrospective analysis and field investigations. As changes in livestock management took place and new tools of disease treatment and prevention became available, the section assessed problems and complications in an effort to aid individual producers adapt new technology to their management schemes.

Beginning in 1984 the section provided service to companion animals on a partial cost recovery "fee for service" basis. Fees were approximately 10 per cent higher than those available from the private sector in other provinces (tumor evaluation, bacteriology swabs, etc.)

The avian section provided diagnostic pathology reports for poultry, fur bearing animals, fish, amphibians, reptiles and it monitored caged birds for specific diseases hazardous to birds and humans.

Diagnosis of disease and sampling of poultry flocks allowed for health assessment, intensification of production, diagnosis of management errors and control of major disease problems. New management techniques were assessed and related problems diagnosed if disease or decreased production was observed. Research to improve or assess diagnostic efficiency was carried out.

The reproduction section provided specialized diagnostic service for animal species used for agricultural production. Aborted feti and specimens from herds with infertility problems were examined to diagnose causes of reproductive dysgenesis and monitor congenital defects. Confidential reports were provided to producers and their veterinarians. Records were maintained to compare previous problems with current diagnoses. When requested, field trips were made to assess unusual or severe reproductive problems. Consultations were arranged for individual producers regarding reproductive improvement.

# FIELD SERVICES

The field services sector was the principal means through which the department provided technological information and services to improve the effectiveness and profitability of farming and farm families, and to maintain the quality of rural life.

The sector embodied six regional offices, each designed to meet local needs through a network of regional specialists and district extension offices. It also included the home economics and 4-H division and the engineering and rural services division.

One of the highlights of 1983 was a Planning Secretariat study of the information needs of farmers and farm families. While the study was complimentary about the programs provided through regional and district offices, its provided valuable information used to plan future program content, program delivery methods, on-farm consultation and the program delivery skills of staff.

# HOME ECONOMICS AND 4-H DIVISION

The division provided home economics and youth programs and activities to rural Albertans to assist them in further developing their ability to manage the economic and social wellbeing of their families.

Advisory services were provided in in the areas of financial management, foods and nutrition, clothing and textiles, housing and family living. A new project, Money Management, was added to the 4-H program. Project materials were prepared and distributed. Activities in 4-H dealt with leadership, personal development and project work.

Two planning documents were prepared in 1983-84. *Emphasis II* was designed to give the home economics branch guidance for the next five years and *Strategies for 4-H Progress* to provide a framework for the 4-H branch for three years.

Office interviews, telephone inquiries, farm visits and letters increased in the home economics branch. The number of educational courses decreased by five per cent but attendance remained at the same level as the previous year.

Eighty-one per cent of the 4-H members in 1983-84 were rural farm, 10 per cent were rural non-farm, and urban members accounted for the remaining nine per cent. The number of adult volunteer leaders increased by six per cent.

The number of members enrolled in the food project increased by 58 per cent but the number in clothing decreased by eight per cent. Beef, light horse, clothing and foods were the most popular projects.

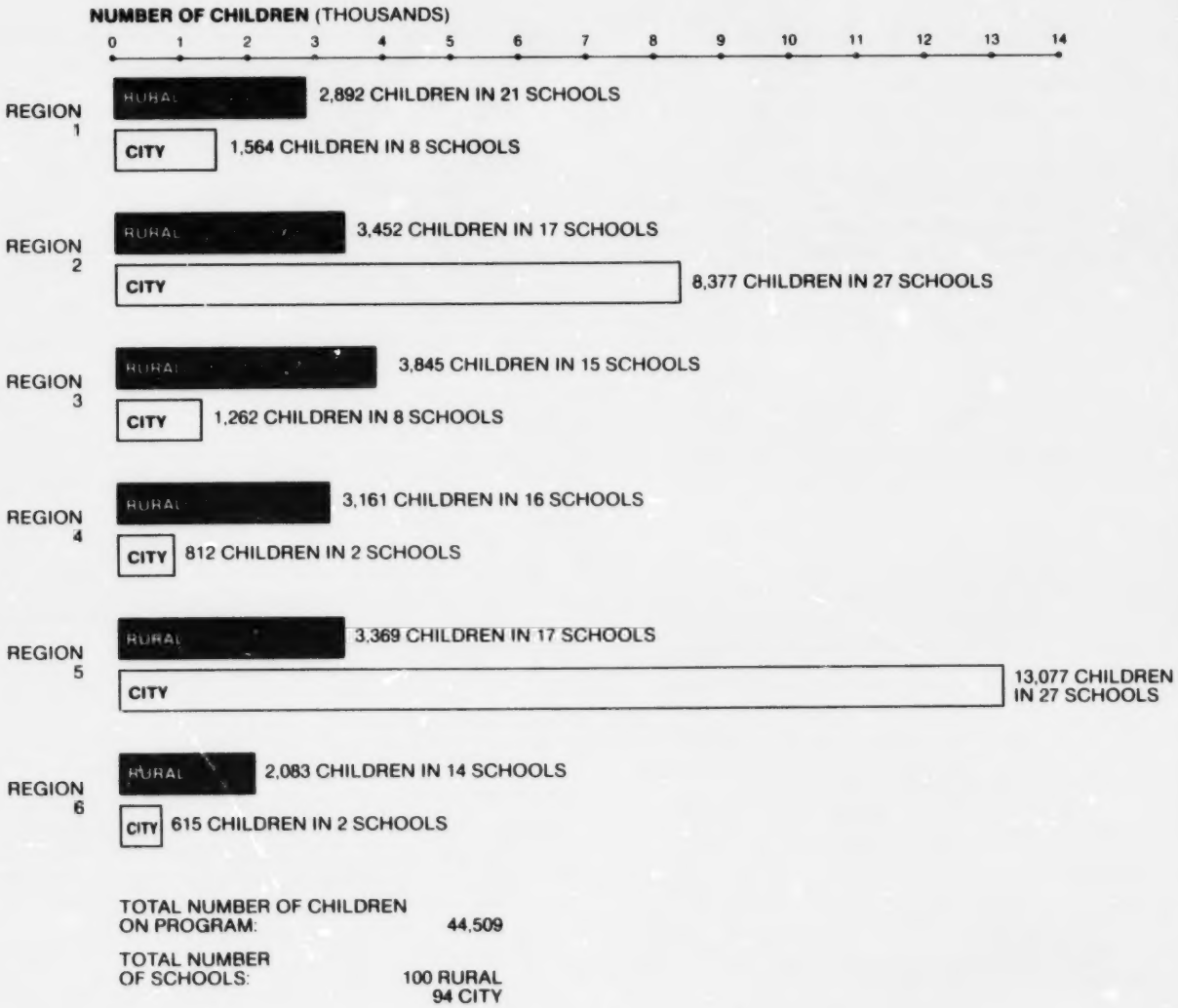
## Home Economics Branch

In 1983-84, the home economics branch updated its purpose and objectives and selected nine priority areas in which to focus attention over the next few years. They included budgeting family income, family financial security, food preservation, home and farm record keeping, remodelling for energy efficiency, time management and weight control.

The total number of client contacts by branch staff increased by almost 10 per cent during the past year. The number of individual client contacts was up by 14 per cent. While the number of courses and workshops was down by five per cent, the number of participants was comparable to 1982-83.

Foods and nutrition, including nutrition at school, continued to be the area in which the highest number of client contacts was made. The number of schools and students involved in nutrition at school remained

# STATISTICAL SUMMARY
# NUTRITION AT SCHOOL
# 1983-84




TOTAL NUMBER OF CHILDREN ON PROGRAM: 44,509

TOTAL NUMBER OF SCHOOLS: 100 RURAL
94 CITY

# HOME ECONOMICS BRANCH
# STATISTICAL PROFILE OF
# SUBJECT AREA ACTIVITIES (PROVINCIAL TOTALS)

| SUBJECT AREAS OF CONTACT | OFFICE INTER-VIEWS | TELE-PHONE CALLS | FARM VISITS | LETTERS | TOTAL INDIVIDUAL CLIENTS | EDUCATIONAL PROGRAMS NUMBER OF COURSES | EDUCATIONAL PROGRAMS COURSE ATTENDANCE |
|---|---|---|---|---|---|---|---|
| NUMBER OF CLIENTS | 28,098 | 80,862 | 3,185 | 47,868 | 160,013 | 3,257 | 70,065 |
| FOODS & NUTRITION | 9.060 | 28,630 | 336 | 16.841 | 54,867 | 1,014 | 21,727 |
| COMMUNITY WORK | 3,125 | 9,763 | 333 | 8,189 | 21,410 | 143 | 3,109 |
| HOME MANAGEMENT | 3,210 | 9,883 | 167 | 6,446 | 19,706 | 479 | 9,010 |
| CLOTHING & TEXTILES | 2,865 | 9,109 | 213 | 3,057 | 15,244 | 596 | 10,432 |
| 4-H ACTIVITIES | 2,982 | 5,702 | 207 | 3,447 | 12,338 | 202 | 5,753 |
| NUTRITION AT SCHOOL | 844 | 5,728 | 957 | 3,668 | 11,197 | 500 | 12,425 |
| HOUSING | 3,107 | 5,575 | 749 | 1,653 | 11,084 | 95 | 1,774 |
| FAMILY LIVING | 718 | 1,640 | 76 | 1,357 | 3,791 | 117 | 2,538 |
| MISCELLANEOUS AGRI. RELATED | 1,228 | 2,029 | 61 | 371 | 3,689 | 39 | 999 |
| HORTICULTURE | 702 | 1,133 | 63 | 325 | 2,223 | 20 | 443 |
| FINANCE & ECONOMICS | 378 | 511 | 40 | 904 | 1,833 | 61 | 1,150 |
| MARKETING & PROMOTION | 86 | 400 | 59 | 720 | 1,265 | 40 | 1,696 |

■ = 2500 CLIENT CONTACTS

FIGURES FOR "NUMBER OF CLIENTS" ARE LESS THAN CLIENT CONTACTS: ONE CLIENT MAY BE CONTACTED ON MORE THAN ONE SUBJECT AREA.

YEAR:
APRIL 1, 1983
MARCH 31, 1984

similar to the previous year. A total of 194 elementary schools and 44,509 children participated.

The branch recorded approximately a 50 per cent increase in individual contacts and a 70 per cent increase in programs in finance and economics. There was a 32 per cent increase in the number of individual client contacts for home management and an 18 per cent increase in the number of programs provided.

Programs on farm family financial management were offered to farm people by district home economists. Many were provided in cooperation with other department staff. Programs which focused on aspects of farm financial management included business arrangements, home and farm record keeping and financial security. To emphasize the need for financial planning, a new publication, *Making Your Money Work For You - Investments*, was prepared. The contribution of farm women to the farm business was recognized in the publication, *Partners in Agriculture - The Economic Contribution of the Farm Wife to the Agriculture Business.*

There was a significant increase in the amount of work by district staff in support of the 4-H program. Individual contacts were up by almost 30 per cent, and group activities increased by 15 per cent over 1982-83, an indication of increased efforts aimed at 4-H leader development. Field staff assisted at numerous 4-H events held at district, regional and provincial levels.

The number of programs offered in the clothing and textiles area continued to be high, however, there was a decrease of 11 per cent in the total number of contacts. The direction of the branch over the past few years has been toward the management of time, money and energy as it relates to clothing, e.g., the selection and care of clothing worn by primary producers when handling pesticides.

A noticeable decrease occurred in the number of family living programs. This was due in part to the shift in priorities and the subsequent loss of a specialist position in this area. Requests for programs dealing with the management of stress and the development of effective interpersonal skills continued to be received.

Field staff continued to deliver home economics information and educational programs. One or two day conferences proved to be extremely well supported in several regions.

The mass media were used extensively by district home economists to deliver timely information to people. In the branch's study of client needs, newspapers were shown to be a major information source for clients. The number of newspaper columns written was 2839, an increase of 9 per cent over the previous year.

Branch staff provided leadership and supported the major activities of agricultural societies, agricultural service boards, further education councils, farmers' markets and rural womens' organizations.

1983 marked the fortieth anniversary of the appointment of the first permanent district home economist in Alberta; branch staff helped organize celebrations held in recognition of this event.

## 4-H Branch

The 4-H branch provided a wide range of services for the 8,535 youth members and 2,452 volunteer leaders associated with the 541 clubs registered in the 4-H program.

The 4-H branch planning paper, *Strategies for 4-H Progress*, was developed to guide the 4-H Branch for the next three years.

The 4-H Foundation of Alberta began phase one of the development of permanent facilities at the Alberta 4-H Centre, Battle Lake.

Staff helped organize the first annual Alberta 4-H alumni conference, and representatives were named from regional 4-H alumni groups to officially form the Alberta Rural Youth Association.

Staff were involved in coordinating acitvities related to celebrating the sixtieth anniversary of the Lethbridge-Coaldale 4-H Beef Club.

Branch staff were also active in organizing the 4-H Hall of Fame; in the past year three longtime 4-H supporters were inducted into the Hall of Fame.

Staff assisted the northwest regional 4-H council in raising approximately $30,000 to furnish the newly dedicated Cloverleaf Room in the new Agricom Building at Edmonton Northlands.

Staff participated in making arrangements for 86 4-H representatives to act as standard bearers at the 1983 Universiade, where 4-H received international publicity.

Some educational project materials were updated and new ones were produced. Outline brochures were published for most of the more popular projects.

There were 141 delegates to the provincial 4-H selections program and 56 4-H'ers were chosen to represent Alberta at a variety of national and international 4-H events. Approximately 6,500 4-H'ers and junior forest wardens took part in the annual highway clean-up. Two club week programs on personal development were attended by 259 senior 4-H'ers. There was a marked increase in the number of 4-H'ers participating in travel and exchange programs.

Forty-nine delegates studied environmental concerns at the annual 4-H conservation camp. One hundred and eleven head of breeding stock were exhibited at the provincial 4-H beef heifer show. Twenth-three of the 25 4-H dairy clubs participated in the provincial 4-H dairy show. Four hundred and fifty 4-H'ers participated in Horse Sense '83 and the 4-H expressions program.

Eighty senior 4-H members were trained in camping and counselling skills at the leadership through counselling seminar. Eight hundred and fifty-five 4-H'ers attended 15 summer camps. Three communication festivals were held for 238 4-H members. The Alberta 4-H leaders' conference was attended by 297 delegates. Alberta 4-H participated in several out-of-province functions: the National Western Junior Fall Classic in Denver, Colorado; the National 4-H Dairy Conference in Madison, Wisconsin; and the International Judging Competition and Seminar in Regina, Saskatchewan.

A major promotional campaign, "Score Goals with 4-H", resulted in an increased interest in the 4-H program. Greater emphasis was placed on support and training for new volunteer adult leaders.

4-H Clubtime, marking its twenty-second anniversary, aired 26 half hour episodes over five television stations. 4-H News Roundup was broadcast weekly over 21 radio stations, and ran year-round.

Fifteen Alberta 4-H educational scholarships, valued at over $17,000, were awarded to 4-H members.

Regional 4-H specialists continued to serve as a vital communication link between 4-H members, leaders and the branch. Provincial 4-H specialists provided services and programs supporting member and leader involvement in the club through international activities. Staff concentrated on providing support to adult volunteer leaders.

**ALBERTA 4-H GENERAL STATISTICS**
**ACTUAL MEMBERSHIP BY PLACE OF RESIDENCE**

| | Girls | Boys | Total |
|---|---|---|---|
| Rural Farm | 3,657 | 3,214 | 6,871 |
| Rural Non-Farm | 617 | 248 | 865 |
| Urban | 609 | 190 | 799 |
| TOTAL | 4,883 | 3,652 | 8,535 |

Total number of clubs: 541
Total number of adult volunteer leaders: 2,452
Average age of 4-H members: 13.03
Average tenure of 4-H members: 2.83
2 Average age of 4-H members: 13.03
Average tenure of 4-H members: 2.83

## 4-H BRANCH CLIENT CONTACTS

### 1. Educational/Consultative Activities Involving 4-H Clients

| Topic | No. of Events | Attendance |
|---|---|---|
| 4-H Administration | 225 | 1,151 |
| Projects | 1,2611 | 9,649 |
| Personal Development | 55 | 1,382 |
| Communications | 72 | 2,607 |
| Camping | 48 | 1,287 |
| Leadership | 173 | 2,429 |
| 4-H Promotion | 144 | 2,436 |
| Other | 128 | 16,456 |
| Total | 2,106 | 47,397 |

### 2. Client Contacts

| | |
|---|---|
| Office visits | 2,673 |
| Telephone | 19,868 |
| Letters | 7,929 |
| Mail-Outs | 1,236 |
| Copies Circulated | 45,038 |

### 3. Media

| Source | No. of Releases | No. of Media Contacts |
|---|---|---|
| Radio | 609 | 2,169 |
| Newspaper | 732 | 3,030 |
| T.V. | 59 | 506 |

### 4. Major Meetings

| Type | No. of Meetings | Attendance |
|---|---|---|
| Club | 63 | 2,045 |
| District Council | 124 | 2,408 |
| Regional Council | 47 | 1,506 |
| Provincial Council | 15 | 208 |
| Project/Non-Project | 62 | 1,039 |
| Fair Boards/Agriculture Societies | 71 | 488 |
| Other | 87 | 1,765 |
| Total | 469 | 9,459 |

## SUMMARY OF ALBERTA 4-H PROJECT ENROLMENT

| PROJECT | MEMBERS | | |
|---|---|---|---|
| | No. of Girls | No. of Boys | Total |
| Automotive | 2 | 25 | 27 |
| Beef | 1,615 | 2,240 | 3,855 |
| Canine | 44 | 24 | 68 |
| Clothing | 862 | 11 | 873 |
| Crafts | 323 | 50 | 373 |
| Dairy | 117 | 149 | 266 |
| Field Crops | 11 | 11 | 22 |
| Foods | 533 | 69 | 602 |
| Goats | 4 | 5 | 9 |
| Horticulture | 36 | 24 | 60 |
| Interior Design | 16 | 0 | 16 |
| Junior Leadership | 161 | 74 | 235 |
| Leathercraft | 21 | 22 | 43 |
| Light Horse | 1,253 | 465 | 1,718 |
| Mechanics | 0 | 4 | 4 |
| Money Management | 4 | 4 | 8 |
| Outdoorsman | 25 | 51 | 76 |
| Pheasant | 150 | 170 | 320 |
| Photography | 51 | 35 | 86 |
| Poultry | 3 | 1 | 4 |
| Rabbit | 8 | 8 | 16 |
| Range Management | 0 | 1 | 1 |
| Self Determined | 75 | 30 | 105 |
| Sheep | 68 | 45 | 113 |
| Small Engines | 10 | 285 | 295 |
| Sugar Beets | 10 | 9 | 19 |
| Swine | 7 | 9 | 16 |
| Tractor | 0 | 11 | 11 |
| Vet. Science | 28 | 13 | 41 |
| Woodworking | 20 | 117 | 137 |
| Other | 48 | 57 | 105 |
| Total | 5,507 | 4,020 | 9,527 |

# MAP OF THE SIX ALBERTA AGRICULTURE REGIONS

# REGION 1 - SOUTHERN REGION, LETHBRIDGE

The weather pattern of the past three years continued, with the eastern part of the region receiving more precipitation than the western part. Hot dry weather in July and August caused some deterioration of crops and pasture; however, a general rain in August resulted in above average crops of reasonably good quality.

Irrigated crops yielded well, particularly soft white wheat, potatoes and corn. Sunflowers and pulse crops yielded reasonably well.

Potato producers experienced good prices as did sunflower growers. Other crop prices were equivalent to or lower than in previous years.

Livestock producers received some price increases for feeder cattle and calves but this industry, as well as swine and sheep producers, realized reduced returns.

Input costs continued to rise in some areas but at a much reduced rate. Generally, all types of producers experienced lower net returns resulting in a continued demand on lending institutions for refinancing of liabilities over extended time periods. Land prices turned downward, particularly in the dryland farming districts.

Agricultural service industries and equipment dealers experienced declining sales, but the urban centres of the region did not experience the rapid economic downturn experienced by some of the major cities in the province.

Agricultural processing industries continued to operate productively and alfalfa processing plants experienced a moderately good year, giving the alfalfa producer a reasonable return.

The continuing trend of lower net returns resulted in an increased demand by farmers for technical information and advice to assist them in maximizing profits under poor economic conditions. Alberta Agriculture staff implemented many diverse programs which addressed all of the major production areas.

There was a significant increase in the number of farm visits as a result of increased demand from farmers for a closer analysis of their particular farming situation.

District and regional staff completed 4,522 farm visits which included 918 new farms. Major emphasis was on cereal crops, special crops, forages, beef cattle, swine and dairy. An increased amount of financial management advice was also requested.

District and regional staff cooperated with major commodity groups in planning production and economics seminars, particularly in the special crops, cereals, forages, swine and dairy areas. In total, the region held 221 educational events with an attendance of 5,760 producers. During the summer months 27 tours were held to view demonstrations in crop production, crop pest control, fertility, weed control and soil conservation and were attended by 1,126 producers.

Specific projects under the on-farm demonstration program were continued in the areas of fertilizer application, crop varieties, minimum tillage, range management and special crops.

Production economics and marketing played an increasingly important role in all crop seminars as farmers became more concerned with their net returns. Those achieving good production levels looked for new marketing approaches to improve income. Six specific marketing seminars were successfully held with an attendance of 204 producers.

Liaison with the Alberta Agricultural Development Corporation staff continued, particularly in areas of livestock and dairy production. Regional specialists reviewed and analysed many farm situations to assist loans officers in evaluating financial proposals. District offices held 2,462 interviews at which farm business management and credit were discussed.

Agricultural service boards continued to deal with weed control and warble control. Where soil salinity was a serious problem service boards expanded and promoted control measures, utilizing funding under the soil conservation area program.

Specific weed control programs dealing with field bindweed and knapweed continued to be successful. Soil conservation by means of recropping was discussed at many seminars. Three districts carried out extensive soil moisture analyses this spring to assist farmers in deciding whether or not to seed stubble land.

District staff were active in assisting agricultural societies with fairs, exhibitions and other events, and provided support and advice to cooperative seed plant boards.

Green certificate training activity in 1983-84 declined as the program was on hold for most of the year. Eighteen trainees completed the year's contract but the waiting list for new applications grew to 26 by the close of the year. Contact with former trainees showed no graduates out of work with most remaining in farm jobs. Despite the administrative setback of the past year the program continued to attract support from trainees, farmers and other agencies.

Intensive use of the media by district and regional staff continued. Numerous news columns were published in local newspapers, and district offices published 132 newsletters. Radio continued to be a major means of reaching clients, and staff participated in or planned 69 television programs. Agrivision presented 32 half hour programs that were very well received by farmers.

Ag-Expo held in March was very well attended with over 80,000 visitiors. District and regional staff have a major involvement in this exposition.

# REGION 2 - SOUTH CENTRAL REGION - AIRDRIE

1983 was not a good year for producers or the industry serving them throughout the region. The weather, markets and general economic conditions put pressure on many operators forcing them to re-examine their approach to managing their finances and resources in order to maintain a viable cash flow position.

Precipitation during the growing season averaged 60-70 per cent of normal with the timing of rains determining yield and quality of crop. A very hot period from mid-July through August aggravated an already short supply of water for both domestic and livestock needs. This was followed by a very dry fall and snow-fall levels across the region at 45-55 per cent of normal during the winter of 1983-84.

Crop yields were near average and quality of grain in the bin was excellent but kernel size was smaller than normal. Beef herds were maintained close to the previous year's level. Dairy and sheep producers consolidated their positions. Some expanded by purchasing from those who sold out. In anticipation of a higher demand for pork in 1984 swine producers increased their herds.

The continued eroding of land values and thus the value of farm assets combined with unstable product prices created financial stress for producers. Service industries and many processors were affected as producers cut back on purchases or applied extra pressure when buying.

Services and programs developed by field services staff in the region were designed to help producers make decisions that would benefit the business, management and productivity of their farm.

Fifty-three courses on farm business management and financial planning of two to three days duration, were attended by 1717 farmers or their spouses. District agriculturists reported an increase in farm calls with 1235 direct consultations on specific problems the farmer was facing.

There were 54 crop production courses offered of one to two days duration with 2130 producers in attendance. These provided farmers with the latest technology on varieties and management practices for their area. District agriculturists offered 256 extension education programs to 7016 rural people in cooperation with farm leaders, industry professionals, research personnel and department specialists.

During the year, 367 news columns were printed in 33 weekly newspapers in the region. Seventy radio broadcasts were made and 24 newsletters were printed and distributed to rural ratepayers, all giving topical and timely information. A total of 23,438 publications and bulletins was distributed.

District agriculturists in region 2 attended a total of 562 meetings in an advisory capacity to such agencies as agricultural service boards, co-op seed cleaning plants, agricultural development committees, agricultural societies, fair boards, surface rights boards, range patrols, 4-H agricultural clubs, regional planning commissions and numerous community and farm organizations.

On-farm demonstration projects funded through Farming for the Future grants continued to expand with a total of 25 projects totalling $45,000 either in progress or approved. Specialists and district agriculturists continued supporting Chinook Applied Research Association activities.

Regional specialists continued to provide support to programs in the region and advisory service and guidance to branch staff to meet the needs of the producers and industry in the region.

Farm training, through the green certificate program survived a critical stage of review and at year end had 26 trainees on farms. This program continued to gain in popularity.

Soil conservation continued as a high priority for development and extension of effective technology. The region's "Keep Your Stubble Up" slogan proved effective in persuading more farmers to leave their stubble as cover to catch snow and prevent soil erosion. District agriculturists, with the assistance of the soil salinity and conservation specialist checked salinity maps of each district in the region to establish the acreage affected by soil salts.

The regional farm economist prepared a new farm accounting manual which gained province-wide distribution. Crop and livestock production data were gathered for use in farm management programs and as a guide to producers making decisions on production.

The regional engineering specialist modified or redesigned buildings for livestock producers to improve environmental control, and directed the emergency water pumping program in the region.

Livestock specialists, district agriculturists and practising veterinarians continued to cooperate in producing low-cost, efficient ration formulation and to provide management advice to reduce disease incidence in livestock herds.

# REGION 3 - CENTRAL REGION - RED DEER

In 1983-84, region 3 district agriculturists and regional specialists successfully met the needs of the 11,000 producers of central Alberta. This was accomplished through the use of effective seminars and demonstrations, as well as individual consultations, telephone conversations, office visits and farm calls.

Producers were concerned about falling prices, below averageyields in barley and canola, cash flow problems, production costs, and the reduced ability to repay debts. Those not troubled by financial solvency faced the difficulty of operating on reduced credit.

Staff concentrated its efforts on production, cash flow, financial management, marketing, water management, and survival of the rural community. Over 500 courses directed by district agriculturists and regional specialists were put on.

Courses ranged from one-day seminars to lengthy series. Some of the noted courses were the hog management series in Lacombe, Olds College, Red Deer Community College and Bashaw; a grain marketing seminar in Rimbey; a feedlot manager's school in Ponoka; a beef marketing course in Ponoka; an animal health home study throughout the region; a drainage conference in Camrose; a seminar on the two family farm in Red Deer and several farm management activities in the eastern portion of region 3. Several offices and regional specialists were involved in farm financial management courses and activities.

Not including course activities, rural producers used district agriculturist advisory services over 63,000 times for production, management and marketing information. The district agriculturist offices responded to 21,500 office interviews and 29,450 phone calls. The average district agriculturist visited over 155 farms to assist central Alberta producers with increasing production.

The green certificate farm training program operated at a reduced capacity with 19 farm trainees being trained within the region.

The region was host to some major agricultural events including the Alberta Pork Congress, a seminar on the Agro Electronic show, fifth annual feedlot management seminar, and Western Barley Growers' Conference.

Demonstration plots were an important extension tool. Nineteen projects were approved under the farming for the future on farm demonstration program. The projects included deep plowing, pasture management and equipment development.

District agriculturists continued working on agricultural service boards, seed plant committees, agricultural development committees, agricultural societies, range patrol committees, farmers' market committees, and intergovernment agencies. The attended 502 meetings of this nature during the past year.

Regional specialists continued to liaise with agribusiness, serviced producer requests for management and technology assistance, conducted or assisted with applied research and demonstration projects, and assisted district staff with program development.

# REGION 4 - NORTHEAST REGION - VERMILION

During 1983-84 the major concern of farm people in region 4 centred on the economic situation. Three preceding dry years coupled with relatively high interest rates, increased input costs and reduced product prices created problems for all farmers. The extent of the problems varied considerably but the overall effect was definitely negative.

Crop yields in 1983-84 were near average in most districts despite a very dry spring. A significantly larger acreage was planted to canola in response to poor prices and sales opportunities for wheat and barley during the previous fall and winter. Harvest conditions were generally favorable and most crops were taken off in relatively good condition.

Livestock producers in region 4 experienced a variety of situations during the year. Beef cow-calf producers suffered through extremely poor grazing conditions for much of the spring and summer. Further culling and herd reductions occurred during the period. By fall renewed optimism led to some producers increasing their breeding herds for the coming year.

Pig producers had an average year with slightly reduced net returns resulting from lower prices and some cost increases.

Production restrictions created severe cash flow problems for a number of new dairy producers. Herds were culled heavily and much greater emphasis was placed on increasing production per acre. Dairy production plus clubs operated in three areas during the year.

District field services staff emphasized a balanced program of services and activities for farm clients during the year. Total office and farm contacts (53,975) were slightly higher than for the previous year. Courses, meetings and programs developed for farm clients increased by 36 per cent in 1982-83 with a corresponding increase in attendance of 39 per cent. There was an increase in the number of meetings on farm financial management and crop marketing in response to requests and interest from farmers. Several large seminars were held across the region involving two or more districts with an attendance of over 100 farmers in each case.

District agriculturists reported a substantial increase in the number of farm visits to deal with oilseeds, forages, pigs, agricultural credit and marketing.

The number of office interviews increased for cereal and oilseed production, dairy, farm financial management and marketing, but were down with respect to forages, beef, hogs and agricultural credit.

The on-farm demonstration program was utilized extensively during the year. Fourteen project proposals were submitted from the region and 10 received approval. The subjects ranged from grazing demonstrations to wild rice production to pig farrowing crate comparisons. The demonstration projects proved to be a very effective method of introducing new technology to farmers.

District agriculturists in region 4 continued to play an active role in working with local committees, boards and associations. They attended 125 agricultural service board meetings, 74 agricultural society meetings, 65 agricultural development committee meetings and 131 seed cleaning plant board meetings.

The green certificate farm training program continued to be very popular. Crop production and dairy production were the most popular options. New trainers and trainees increased dramatically during the year, largely as a result of the depressed economic situation with many more people looking for employment. Graduates from the green certificate program continued to be successful in finding employment.

# REGION 5 - NORTHWEST REGION - BARRHEAD

Annual precipitation during the growing season was above normal but its distribution was extremely erratic. Early spring droughts were followed by excessive moisture conditions in many districts. This was followed by a period of extremely dry hot weather during August that resulted in heat stress and light bushel weights in many areas.

Spring germination of shallow sown crops such as canola and forage seed was uneven and growth of all crops including perennial pasture and hay was unusually slow until late june. Overgrazing was common throughout the region.

Cereal and canola yields ranged widely, with the better crops still only being average. First cut hay crops were slightly below average but second cuttings were good. The quality of most hay was above average. Forage seed yields were extremely variable; clovers and alfalfa generally suffered more than the grasses.

Weed control was difficult in 1983 owing to wet soft fields during the normal spraying season. The demand for aerial herbicide applications exceeded custom capacity. Canada thistle infestations were extensive throughout region 5 and scentless chamomile continued to spread in areas south and west of Edmonton.

Insects were not a major hazard to crop production in 1983, although some districts did spray for grasshoppers. The anticipated bertha armyworm outbreak did not develop. Canola root maggots were widespread. Flea beetles and cutworms caused isolated concerns.

The generally lower than normal crop yields created financial hardships for many farmers in the region, compounded by the cash flow problems of previous years.

Barley prices strengthened somewhat and marketing opportunities were good. Similarly, canola prices and quotas were good. Unfortunately most producers could only take partial advantage of these opportunities because of yield reductions.

Calf prices in the fall of 1983 were in the $80 to $95 range, similar to 1982 prices.

Hog prices declined in the last half of 1983 as hog numbers increased in North America, following record high prices in the summer of 1982. In 1982 and 1983 hog enterprises expanded throughout the region, influenced by the Pork Producers' Market Insurance Plan. Declining earnings, continued cost increases and relatively high interest rates made for a difficult year for hog producers. An increase in the number of producers experiencing severe financial problems became evident.

The dairy industry was similarly not without its problems in 1983. Lack of quota, high investment costs and interest rates caused concern among producers. The less established operations were in the most jeopardy.

The number of clients contacted for the Agricultural Development Corporation was up by 22 per cent during 1983-84. While the number of people getting loans remained about the same as 1982-83, the number seeking financial counselling increased significantly. This was also the case with regard to financial counselling requests directed toward district agriculturists.

In total, 201 loans were submitted for an overall value of around $28 million, a decrease of $1 million in 1982-83. The downturn in the economy continued to reduce the demand for land, and resulting in a price decline of up to 50 per cent in some areas from the peak prices of 1979-80.

District staff conducted 19,776 office interviews and responded to 28,978 telephone calls. These contacts sought a wide range of production, management and marketing information. Similarly, 3,968 farm calls were conducted.

In total, 424 educational courses, demonstrations and tours were conducted, attended by 11,951 producers. Information disseminated covered production, financial management, marketing, and skill training. Regional programs included "Farming and the Challenge of the '80s" and the "Alberta Pasture Symposium". The latter was a joint venture with the animal industry and plant industry divisions, plus the West Central and Pembina Forage Associations.

Publications for the region included a revision of the pasture management manual and a major crop production cost study. In addition, six Consensus Research Data production reports were updated.

Several district and regional staff members continued to be heavily involved in demonstrations and field applied research projects. Work with agricultural service boards and forage associations in this regard was expanded in 1983. The on-farm demonstration program continued to be extremely popular and 29 project proposals were submitted for review.

The expansion and upgrading of several livestock enterprises continued, resulting in numerous requests being directed to the regional engineering staff for information on planning layouts, manure handling systems, heating and ventilation and water supply systems.

Although interest has decreased, district agriculturists continued to provide input into the subdivision process and in the refinement of local land use by-laws. The County of Strathcona gained subdivision approval authority during 1983-84, being the fourth such group to receive this status in the northwest region.

District staff attended 764 meetings as a result of their involvement with agricultural fairs, seed cleaning plants, rural crimewatch groups, farmers' markets, agricultural development committees, further education councils, 4-H clubs and agricultural service boards. One new agricultural service board was formed in improvement district 17, bringing the regional total to 12.

The green certificate farm training program underwent a period of review during 1983 which resulted in an decrease in activities. However, 20 trainees were certified for level 1 and 5 for level 2.

The number of 4-H clubs in the northwest region stabilized at 114 during 1983-84. This was the same as 1982-83, although club membership decreased by 140 to 1,857. Multi-project clubs, beef clubs and light horse clubs continued to be the most popular.

During agriculture week several districts participated for the second time in a major shopping mall promotion at Southgate.

# REGION 6 - PEACE RIVER REGION - FAIRVIEW

Major activities in the Peace region were centred on extending production, marketing and financial information to the farmers and farm families within the region. Emphasis was placed on programs and activities related to cereal, oilseed and forage crop production and farm management.

Most staff involvement (22 per cent) was in the area of crop production. Heavy use was made of demonstration plots through agricultural service boards, through the Farming for the Future on-farm demonstration program, and through cooperation with agribusiness. Farmers toured these plots and viewed their progress. Results of the trials were published in newsletters and newscolumns and were used over the fall and winter for producer meetings.

In 1983 the region saw some excellent crops and some very poor ones. The region's wheat acreage topped one million acres for the year with yields well above the long-term average. Some individual producers reported average yields in excess of 60 bushels per acre. Yields for barley and canola were average to below average. Farmers in the region were again frustrated by the lack of marketing opportunities for their grain. Quotas were tight and many farmers faced severe cash flow problems. District agriculturists and specialists counselled 418 farmers individually and conducted seven marketing meetings with a total attendance of 196.

District and regional staff continued to be involved in farm financial management and credit counselling. Many clients were in severe financial difficulty. Staff were sometimes able to work out suitable alternative financial arrangements.

Regional and district staff worked closely with the Fairview College in the second year of the agriculture financial management program. Thirty-five farm families enrolled and there was a waiting list for the program. Plans were being made to expand the program.

The Farming for the Future on-farm demonstration program proved to be valuable for testing new research ideas under local conditions. Nineteen projects were underway including some in irrigation, soil management, soil fertility, pasture production and leafcutter bee management. Regional specialists as well as research staff from Canada Agriculture at Beaverlodge were involved in these projects.

Contacts by staff with clients were up by 2.5 per cent over the previous year. However, on-farm consultations increased by nearly 10 per cent to 3719. As a result, staff were able to provide information on production and financial management that more closely suited the individual farm situation.

The 1983-84 fiscal year was one of difficulty for Peace region farmers. However, the client needs study indicated that of the farmers surveyed in the Peace River region, 100 per cent were aware of Alberta Agriculture and the services offered, and 78 per cent of them had made contact with one of our district offices in the last year.

# ENGINEERING AND RURAL SERVICES DIVISION

## Extension Services Branch

This division provided services not readily available from nongovernment sources, which assist in developing and maintaining farms, and improving the quality of life and rural communities. In the department's recent reorganization, extension services branch activities were transfered to the engineering and rural services division.

Administration of the farm safety program also came under this division in April 1983. Program personnel participated in provincial, national and international agricultural health and safety programs. Provincial activities included an intensive school program with farm safety displays; 140 farm safety workshops and seminars with approximately 5,000 farmers and farm workers in attendance; mobile safety displays at 14 agricultural fairs; and the revision and printing of 50,000 copies of *A Child's Guide to Farm Safety* which was distributed to rural students in grades one to four. Five hundred teachers' kits and 1,000 poster calendars were sent to rural schools. The farm safety program also cooperated with the Farm Equipment Dealers' Association of Alberta and British Columbia in printing and distributing 20,000 copies of the Farmers' Safety Almanac. Farm accident monitoring provided useful data regarding on-farm injuries. A reduction in both child deaths and in disabling injuries was observed.

Agriculture manpower programs continued to be very popular. One thousand and eight students secured temporary employment in subsidized programs through liaison and cooperation with the Canada Employment and Immigration Commission.

The water well recovery program provided $61,323 in grants to 30 applicants.

The extension services branch provided education and development services to support extension activities of the field services sector.

It was responsible for the green certificate farm training program, the Alberta-Hokkaido exchange, agricultural education, the home study program and special employment programs.

These activities provided technical and other information required to help maintain viable family farms and to assist producers in improving their operations.

### Agricultural Education

The agricultural education section in cooperation with Alberta Education, pursued the objective of updating agricultural content in the public school curriculum. An agricultural education steering committee was established for the purpose.

Coordinating the delivery of programs between the agricultural colleges and the department's field services was the main focus of the agricultural education and rural extension advisory committee in 1983-84.

The section published a 1984 fact sheet listing 72 home study courses offered by Alberta agencies and institutions on agricultural and rural topics.

Assistance was provided to career days and science fair judging in public schools.

The Alberta Agriculture hall of fame selection committee reviewed 14 submissions and recommended five persons to the hall of fame.

## Home Study

The objective of Alberta Agriculture's home study section was to develop and maintain educational programs for self-study by farmers and others or for use as a support resource for the delivery of extension programs in the field.

Home study supported two extension programs: the Alberta animal health course and the Alberta pork production course. Through these courses, over 1,500 farmers were involved in regional and district educational activities. Home study completed phase one in the development of a course designed to introduce farmers to computer applications in the farm business and to help them choose a computer to meet their needs. The course was delivered to 1300 students, many from other parts of Canada, the U.S. and around the world.

The home study section in cooperation with the farm business management branch, developed an in-service program, a seminar program for farmers and a television series for the Alberta public. Three thousand six hundred students were involved in home study courses last year.

Activities in 1983-84 included the completion of the Alberta dairy production course, revisions to the grain and oilseed marketing manual, revisions to the Alberta soils course, and cooperative extension efforts with the Canadian Canola Council, Rural Education and Development Association, and the University of Alberta, Faculty of Extension.

## Green Certificate Farm Training

Activities of the green certificate farm training program were reviewed and evaluated during the year, resulting in a renewed mandate and funding support. The program continued to work with top farm producers providing training and education to those interested in farm careers. The green certificate program offered training in dairy, beef, swine, sheep, dryland and irrigated crop production specializations. A total of 115 certificates was awarded to successful trainees during the year.

## Alberta Hokkaido Agricultural Exchange

The Alberta/Hokkaido agricultural program continued to develop a broad base of activity and to maintain reciprocal exchanges. Nine Japanese exchangees were received on dairy, crop, beef and honey production farms in April 1983. Nine Alberta exchangees were placed on dairy, beef, and horticulture enterprises in Hokkaido.

Alberta sponsored the first host family exchange to promote increased understanding of cultural differences.

The tenth Hokkaido exchange professor was placed in the physics department at the University of Alberta. The fourth Alberta exchange professor was placed in the economics department of a Hokkaido university.

# Rural Services Branch

The agricultural services section provided administrative and operative support to agricultural service boards and agricultural development committees. Sixty-six agricultural service boards received $3,900,000 in grants to assist them in the execution of programs in soil conservation, weed control, field crops, pest control, horticulture and tree planting, livestock improvement projects, and training and extension.

The Minister approved the establishment of new agricultural service boards in the municipal district of Acadia Valley and in improvement district No. 17 East, Slave Lake.

Emphasis was placed on providing training to agricultural service boards, agricultural fieldmen, district agriculturists and district home economists to increase effectiveness in program planning, budgeting and implementation. Sixty-eight workshops, focusing on the role and responsibilities of agricultural service boards, were held throughout Alberta. An evaluation of agricultural service boards in improvement districts was undertaken in cooperation with Alberta Municipal Affairs which resulted in the implementation of a number of policy changes by that department.

To assist boards in carrying out their responsibilities three issues of the provincial agricultural service board newsletter and a training opportunities calendar were circulated. In cooperation with other divisions and branches an agricultural service board planning guide was developed and 11 agricultural program outlines were circulated.

Sixty agricultural development committees continued to provide an understanding of local conditions and needs in considering loan applications and the disposition of public land.

## Community Services

The community services section provided administrative and program support to 274 agricultural societies throughout Alberta in 1983-84. Community cooperation and problem solving concerning the effective management of agricultural society activities were emphasized.

Nine new agricultural societies were formed in 1983-84. One hundred and ten consultations were held with communities interested in forming agricultural societies as well as those with established agricultural societies. Consultations covered the areas of reorganization, program development and operations, leadership development and facility development and maintenance.

Four workshops were held to assist in the orientation of fair committees and improve the quality of local fairs and shows. Twenty-one regional workshops were also held, attended by 326 participants representing 99 different agricultural societies and community organizations.

The community services section continued to support and cooperate with the Alberta Association of Agricultural Societies in its capacity as the provincial umbrella organization for agricultural societies.

Financial support for programs such as exhibitions, fairs and displays was provided in addition to assistance in the construction, renovation and operation of multi-use facilities. One hundred and sixty-eight operating grants totalling $853,268; 147 fair grants totalling $227,595; and 29 capital grants totalling $1,364,266 were provided.

# Engineering and Home Design Branch

## Engineering

Publications were again the major undertaking of the engineering specialists with considerable emphasis being placed on the development of software programs compatible with the department's equipment. Seminars were held with topics ranging from air seeders and zero till to heat exchangers and magnetic water treaters. A Canadian patent was obtained for the grass seed harvester which was developed in conjunction with an Alberta manufacturer. Plans were finalized for a support structure for a 50 tonne overhead storage bin. Plans for apiary facilities were also developed.

Alberta hosted the annual meeting of the Canada Plan Service, with representatives from the federal government and nine provinces attending. The minimum distance separation (MDS) formula used in conjunction with the certificate of compliance program was well received by regional planning commissions.

The skill training program served 740 students in 1983-84. While decreased enrolment in the wiring and plumbing courses was noted, demand was strong for welding and mechanics.

The emergency dugout pumping program was in strong demand in the dry areas in southern Alberta. Units were transferred from northern to southern Alberta. A total of 379 farmers was assisted.

The Farm Implement Act administration issued licences to dealers and distributors of farm equipment and dealt with farmers' complaints relating to equipment performance.

A new farm implement act was proclaimed, resulting in the need for a newly worded bond from dealers and distributors.

## Home and Community Design

The Heffering study of client needs for home economics which was completed in 1982 showed that 55.5 per cent of respondents saw a need for education on remodelling for energy efficiency. As a result, a five-year program, the *Home Works Conservor Series* was developed. Resource material developed by the branch was delivered to farm families by the district home economists.

Twenty seminars were held to discuss new residential heating equipment, new ventilation systems, hybrid heating systems, and the price range of space heating requirements in standard homes. Three hundred and seventy-seven computerized heat load programs were carried out.

A program geared to farm families concerned about the cost of interior finishing materials and their installation continued to be popular. Twenty-three do-it-yourself interior home improvement workshops were conducted.

Preliminary home planning assistance was provided to over 400 farm families.

Fifteen agricultural societies were assisted with planning community facility projects. The projects included community halls, a cattle washrack building, recreational complexes, stables, a racetrack, rodeo grounds, an equestrian learning centre, exhibition hall and grounds. Seven plans for kitchens in rural community facilities were developed.

# MARKETING

The marketing sector of Alberta Agriculture provided a service to Alberta producers and processors, and facilitate a coordinated government response to their requirements. The sector provided market development and support services to Alberta's agriculture and food products industry, to optimize returns from market opportunities, and encouraged the development of value-added activity. The broad objectives of the marketing sector were fulfilled by:

- evaluating market opportunities domestically and internationally
- coordinating and supplying services to assist in achieving a response to these opportunities
- liaising with and utilizing established private and public sector resources
- developing market and sector strategies and assisting in the development of individual enterprise strategies
- providing a mechanism for private sector input into the departments' policy and planning process.

The marketing sector as a government service organization provided a wide variety of services and support programs to the private sector. Close contact with the private sector was fostered to encourage the exchange of information which permitted the marketing sector to respond with support in the form of diverse technical, financial and marketing information and assistance.

## MARKET DEVELOPMENT DIVISION

The market development division continued to develop, coordinate and implement services and support programs to assist agricultural producers, processors and marketers to increase sales of agricultural commodities, processed food, feed products and technical services.

Although total world trade declined by 2 per cent in 1983, trade in agriculture and foodstuffs continued to increase. Alberta shared in that growth by exporting approximately 25 per cent or $2 billion of Canada's $8 billion in agricultural and food exports.

The division continued to emphasize Alberta's best products - those based on meat, livestock, grain and canola, and the products derived from them.

Alberta remained a major supplier of export commodities including wheat, wheat flour, barley, canola, meats, whiskey, beer, water, cattle, swine, animal feeds, hides and skins. Alberta also exported large quantities of canola oil and meal, peat moss, semen, embryos, forage seeds, honey and malt. Export markets were developed and expanded for cookies, crumpets, pasta, frozen bread dough and processed meats.

The division emphasized the following markets and commodities in order of priority:

Markets:
1. Alberta, British Columbia and Quebec
2. Japan
3. Pacific Northwest (United States)
4. California and Western United States
5. South Korea
6. European Economic Community (United Kingdom and West Germany)
7. Mexico
8. People's Republic of China
9. U.S.S.R.

Commodities/products:
1. Meat - beef, pork, horsemeat, processed meat products
2. Canola - oil (refined and crude), meal, seed
3. Processed food - flour and pasta, processed vegetables and other grocery products.
4. Livestock - genetics (beef, dairy, horses and swine) -commercial and other livestock

5. Field crops - forage seeds, pulses, alfalfa, potatoes, sunflower
6. Other products - peat moss, honey, malt, malting barley, hides, offal, dairy products, vegetables, etc.

The market development division offered financial assistance, market development programs and advice to Alberta companies on market opportunities and methods of marketing.

The division consisted of two branches: one serving the Americas, and the other serving overseas. The division also emphasized trade show participation, which encouraged Alberta companies to explore market opportunities, as well as the sale of technical information and skills.

## The Canadian Market

In 1983-84, Alberta Agriculture stressed the domestic market as a priority for Alberta's processed food products and commodities.

Out-of-province shipments in 1982 totalled $3.2 billion. Of this, exports totalled $2.0 billion, leaving domestic shipments at $1.2 billion. Meat, live animals and other crops and crop products including honey, wheat flour, dehydrated alfalfa and canola products were the main goods shipped to other provinces.

About 65 per cent of Alberta's processed foods and beverages were marketed in Alberta. Their value was $3.2 billion.

Working closely with the agri-food branch and industry, many new companies and new products entered the marketplace. Evidence of this was the 25 per cent increase in membership in the Alberta Food Processors' Association.

Import replacement continued to be a major concern of the market development division. The division made Alberta retailers aware of the imported products on their shelves and encouraged them to more fully support Alberta products.

A retail identification project was initiated to encourage Albertans to buy more Alberta products. Better Buy Alberta shelf tags were used to label Alberta products in 120 stores in Calgary and Edmonton.

A directory entitled *Marketing Food in Alberta* was prepared for the use of Alberta companies.

The Alberta Food Marketing Advisory Committee, appointed by the Minister, was formed to address concerns and ways and means of improving and expanding the agricultural and food processing industry.

Twenty-four Alberta companies participated in the Alberta Restaurant and Foodservice Association trade show, an increase over the previous year.

Commodity organizations for greenhouse vegetables, lamb and potatoes were assisted in strengthening their relations with wholesale buyers and retail managers via tours and meetings.

Good two-way trade continued for Alberta agricultural products in British Columbia. Major retailers in British Columbia indicated a desire to cooperate in storewide promotions of Alberta food products. A market in British Columbia for Alberta alfalfa cubes was identified.

## Service market

The Montreal beef market received considerable attention from market development in 1983. Efforts were increased to maintain and expand this market, emphasizing boxed and portion-cut beef rather than carcass beef.

Considerable time and effort was spent with the Quebec Culinary Society, the Alberta Culinary Arts Foundation and major packers to increase Alberta's share of portion-cut beef business with the Quebec hotels and restaurants. Promotions were scheduled 1984-85.

The Ontario market for livestock and value-added food products was pursued via participation in the Royal Winter Fair and Hostex Food Show in Toronto.

## United States

The United States was Alberta's largest foreign market for agricultural and food products, excluding grains, taking over 60 per cent of Alberta's exports.

Alberta continued to show increases in the export of agricultural products to the United States in 1983, increasing by 17 per cent from $156 million in 1982 to $183 million in 1983.

Live animals, mainly slaughter cattle and breeding stock, red meats (beef and pork) and whiskey,

continued to be Alberta's top three exports to the United States.

The major vehicle for promoting the superior genetic makeup of Alberta's beef and dairy cattle was the U.S. livestock show program. In 1983, Alberta had a booth in Madison, Billings, Denver and Houston: the cattle shows where the traffic was heaviest. Sales have increased steadily each year.

The Alberta Red Meat Study, initiated by Market Development and completed in June 1983, ranked California and the Pacific Northwest as the priority markets for Alberta beef, the same two markets (in reverse order) for Alberta pork and processed meats. In 1983, implementation of the study recommendations began with Alberta packers being supplied with a list including major brokers, purveyors and chain stores covering the Pacific Northwest, California and Hawaii. Incoming missions of meat buyers and brokers and outgoing sales missions by packers were encouraged and assisted.

A breakthrough was made in the U.S. foodservice business in January, 1983, with Alberta beef and pork featured in the Sheraton hotel chain in Hawaii.

Canada Week promotions arranged by Canada West Trading company (formerly Safeway Export Development) and supported by market development were held in Safeway stores in Spokane and Hawaii. They featured Alberta beef, pork, processed meats and a variety of grocery products.

As a result of research initiated by market development in the form of canola meal trials on trout, dairy cows and calves, and poultry, Alberta canola meal was accepted as a replacement for cottonseed meal in the Pacific Northwest. In 1983 Alberta shipped over 50,000 tons, up from 18,000 tons in 1982.

Canola oil exports to the U.S. appeared promising with the 'generally regarded as safe' status expected shortly.

Seed potato exports to the Pacific Northwest continued to increase.

Market development staff undertook a mission to Alaska in August, 1983, with private sector respresentatives for livestock, meat, feed and food products. Opportunities were identified for bred dairy heifers, beef, pork, processed meats, grocery products, feeds including alfalfa cubes, seed and nursery stock.

Five Alberta food companies attended Solo Food Shows in Los Angeles and San Francisco with market development assistance in 1983.

Peat moss sales to the United States, mainly the Pacific Northwest and California, continued to grow in 1983, with about 80 per cent of Alberta's production being exported to these markets.

Alberta continued to liaise with American state governments particularly through the Western Association of State Departments of Agriculture (WASDA) and the Western United States Agricultural Trade Association (WUSATA).

The department continued to work with the Alberta Cattle Commission and the Alberta Pork Producers' Marketing Board on joint marketing efforts.

## Pacific Rim and Southeast Asia

During 1983-84 Alberta Agriculture was extremely active in the Pacific Rim and Southeast Asia. Activities included sales missions by the private sector, visits by department staff, hotel promotions, food shows, consulting projects, incoming missions and technical seminars.

The deputy minister visited Japan and Korea in the fall of 1983 to reinforce traditional trade ties and seek new opportunites for Alberta exporters.

In 1983-84 Alberta Agriculture assisted in promoting cheese in Japan, resulting in sales of five varieties of Alberta cheese in Tokyo and other cities.

A new strategy to penetrate the Japanese market for beef was developed, enabling Alberta suppliers to capture a larger share of the market. In August 1983 Alberta Agriculture helped to promote Alberta beef, pork and grocery products at a major hotel in Tokyo.

Korea continued to purchase beef cattle from Alberta, as it has done for the past decade. Alfalfa, forage seed, wheat, barley, rye and oats were also offered. Alberta shipped purebred swine breeding stock to Korea as well.

Sales missions from Alberta visited China, in particular Heilongjiang, Alberta's sister province, focusing on hide sales, opportunities for consulting services, sales of cattle and swine genetics, and rangeland improvement. Alberta Agriculture hosted incoming agricultural delegations from China.

A project was initiated to demonstrate Alberta's ability to assist China with rangeland improvement. The four-year Qiqihar range improvement project should provide

excellent possibilities for commercial sales of Alberta forage seed.

Market development work in Southeast Asia (Indonesia, Thailand, the Philippines, Singapore and Malaysia) undertaken by Alberta Agriculture in this region resulted in commercial sales of breeding swine and high quality beef.

## Latin America and the Caribbean

Because of the large area involved and the wide variation in economic development of the countries in the region, market development drew up a strategic plan to match commodities with countries. Commodity priorities were ranked thus: canola, livestock, specialty crops, consulting services, meats and processed foods.

Countries were rated according to existing business and future potential into two groups: group 1 - Mexico, Venezuela, Colombia; and group 2 - Chile, Peru, Argentina, Barbados, Trinidad and Tobago, Brazil and Costa Rica.

Trials were conducted in Mexico to compared weight gains on animals fed canola meal with those fed soybean meal. The results showed no significant difference between canola meal and soybean meal rations. Promotional work with the feed formulators was started, and larger scale commercial trials were initiated. Mexico purchased 20,000 tonnes of canola seed during the year.

Efforts continued to obtain an import registration number for canola oil, meal and seed for Venezuela. Discriminatory tariffs on canola oil were adjusted through joint federal and provincial efforts. Peru granted approved health status to canola oil.

Support was given to Alberta suppliers to participate in the Palermo Livestock Show in Argentina, the Prado Show in Montevideo, the Esteio Show in Brazil and the Guadalajara Livestock Show in Mexico. Cattle were sold to Argentina, Chile and Mexico, semen to Argentina, Brazil, Chile, Uruguay, Mexico and frozen embryos to Costa Rica. A proposal was submitted to the Canadian International Development Agency for a demonstration program for embryo transfer in Brazil. A quotation was presented to the city of Bogota for mounted police horses. A full financing package was provided using Export Development Corporation credits and credits from a Canadian commercial bank.

Sales of swine breeding stock to Mexico were resumed after import restrictions were relaxed. Exploratory work was undertaken on introducing frozen boar semen into Mexico.

Opportunities for dairy cattle, semen and embryos were identified in Venezuela, Colombia, Trinidad, Costa Rica, Ecuador and Mexico. A proposal for an embryo transfer training program was presented in Trinidad and Costa Rica. A joint marketing proposal for the import and raising of Holsteins was reviewed for Venezuela.

Successful pulse missions to Venezuela, Colombia, Peru and Trinidad resulted in numerous enquiries and sales of beans, lentils, mustard seed and caraway. As a result of joint industry and provincial presentations, Alberta suppliers were successful on a number of World Food Program tenders for pulses.

Enquiries for clipped and double-cleaned oats, alfalfa cubes, potatoes, horse feed supplement, individually quick frozen corn, carrots, peas and wheat middlings were passed on to Alberta suppliers.

Alberta suppliers shipped offal to the Caribbean and Mexico. Forage seeds continued to go to Argentina and enquiries were received from Colombia and Chile.

Consulting service contracts were pursued in Venezuela, Barbados and Peru and a $55 million livestock development project was identified in Costa Rica.

## Europe, Africa and the Middle East

The markets in eastern and western Europe, Scandinavia, Africa and the Middle East were ranked to match Alberta's ability to supply agricultural commodities, goods and services. Market development endeavors were designed to identify and capitalize on specific export opportunities.

The regional and specific country markets, in descending order of priority were: The European Economic Community (U.K. and West Germany); Eastern Europe (U.S.S.R., Czechoslovakia, Hungary); Middle East and Africa (Egypt, Saudi Arabia). Priorities were ranked as follows: beef and dairy cattle, high quality beef, canola oil and meal, leisure riding horses, forage seeds, horsemeat, honey, mustard powder, leafcutter bees, consulting services and joint ventures.

The United Kingdom remained the target market for high quality Alberta beef. In-store promotion and contact with buyers took place throughout the year. Cattle breeders and exporters made several successful sales missions to Britain, still considered Europe's best market for Alberta-bred stock.

West Germany was the principal market for leisure horses; however, two Alberta breed associations pursued an identified market by taking horses to a show and sale in Italy. A German TV production on Alberta's horse industry was completed.

Cattle and swine were exported to Czechoslovakia and follow-up orders were expected for frozen embryos. A mission to Hungary resulted in a sale of leafcutter bees and equipment. Discussions on trade and the possibilities of canola meal and cattle sales to the U.S.S.R. continued.

A forage seed mission to Eastern Europe and Scandinavia resulted in the exchange of seed varieties and prospects for seed multiplication contracts for Alberta growers.

Honey exports to Europe continued. Mustard powder exports increased, especially in western Europe, as did confectionery sunflower seed sales.

Algeria concluded another three-year agreement to purchase canola oil from Canada. In Egypt, plans were concluded for a canola meal feeding trial on broilers and for a joint venture. Additional market investigation in Africa identified opportunities for dairy cattle and agricultural consulting services.

Market development activity in Saudi Arabia involved six companies which participated in the Saudi agriculture show. Prospective consulting and joint venture projects were identified. Dairy cattle and peat moss were exported. One Alberta firm pursued a livestock joint venture and another consulting company made plans to open an office in Saudi Arabia.

# MARKETING SERVICES DIVISION

## Agri-Food Development Branch

The four sections of this branch, the processed food development section, the crop and horticulture development section, the livestock development section and the meat and dairy development section, all provided money and manpower to assist industry in responding to market opportunities.

Grants totalling just under $2 million were disbursed to producer groups and agricultural food processors in support of their developmental and promotional expenditures.

Eight grants were made to meat and dairy associations totalling $474,782. These associations included the Alberta Dairymen's Association, the Alberta Pork Producers' Marketing Board, the Alberta Egg and Fowl Marketing Board, the Alberta Chicken Producers' Marketing Board, the Alberta Sheep and Wool Commission, the Alberta Goat Breeders' Association and the Alberta Beekeepers' Association. Grants were used to assist with the costs of advertising.

Twenty-three grants were made to the food processing industry for advertising, product brochures and other promotional materials, and out-of-province promotions. The grants were made to 21 companies, and the Alberta Food Processors' Association whose members included over 90 processors.

Grants under the livestock assistance program included $305,631 to 23 breed associations; $69.680 to 10 horse associations; $30,634 to the Alberta Swine Breeders' Assocation, Alberta Milk Breeders' Association and Alberta Goat Breeders' Association. An additional $95,000 was given in support of the 1986 World Sheep and Wool Congress, the 1985 World Angus Forum and the 1984 Arabian National Show; and $47,500 was granted to the province's six frozen semen and embryo companies.

Commodity grants of $244,107 were made to 17 crop and horticultural producer associations and $52,299 to six agricultural commodity companies. Associations

**ASSISTANCE UNDER THE AGRICULTURAL GRANTS ACT PROVIDED TO INDUSTRY IN FISCAL 1983-84**

| Sector | No. of Grants | Total $ |
|---|---|---|
| Meat and Dairy Producer Associations | 7 | 474,782 |
| Food Processing Industry | 23 | 539,350 |
| Cattle Breed Associations | 24 | 305,631 |
| Horse Breed Associations | 10 | 69,680 |
| Other Breed Associations | 3 | 30,634 |
| Livestock Shows and Congresses | 5 | 95,000 |
| Semen and Embryo Companies | 6 | 47,500 |
| Crop and Horticulture Product Associations | 17 | 244,107 |
| Crop and Horticulture Companies | 6 | 52,299 |
| Farmers' Markets | 81 | 135,109 |
| TOTAL | 182 | $1,944,092 |

assisted included Alberta Canola Growers' Association, the Alberta Potato Commission, the Alberta Greenhouse Growers' Association, the Alberta Pulse Growers' Association, Western Barley Growers' Association and Landscape Alberta.

A total of 81 farmers' markets was assisted throughout the province with grants totalling $135,109. Most of these grants were used for market establishment and advertising.

In association with other branches, a number of promotional tools were developed. These included a beef seedstock film and audio-visuals for the horse industry, canola, canola meal, processed cheese, and lamb cutting. Promotional brochures were completed for cheese, chicken, lamb, canola oil, swine breeds, horse breeds, forage seeds, alfalfa varieties, corn production, pulses and stews. Thirteen TV promotions were done to support various Alberta crops.

In response to industry needs seven consulting contracts were let. They included a canola meal feed industry attitude survey, comfrey processing and feed evaluation, corn feed testing, effectiveness of the Better Buy Alberta campaign, hog cost of production study and update of the beef brochure.

Planning, organizing and staffing assistance were provided for Agribition, World Percheron Congress, Equitana, Calgary Bull Sale, Round-Up, B.C. Food Show, Hostex, ARFEX and specific buyer promotions.

The branch assisted with incoming and outgoing trade missions.

The staff maintained liaison with producer groups, boards and commissions throughout Alberta, and serviced the requirements of over 100 food processing companies.

## Agricultural Processing Development Branch

The branch emphasized strong extension and liaison activities in its close working relationship with the agricultural processing industry. Branch programming reflected the changing economic realities within which staff had to manage. Staff offered programs that included detailed technical and economic evaluation of new products and processes, research and development assistance, financial incentives, and feasibility studies.

The focus of this sector during the year was primarily on low capital - low risk methods to improve productivity and quality. New products and new processes resulted from technical and financial assistance for firms producing sliced meats, frozen baby carrots and cob corn, salad dressings, processed cheese and dairy products, and numerous specialty foods. New processing systems and improvements to existing lines helped the firms supply the marketplace with fresh and processed meats, pasta, pet foods, cookies, bakery products, honey, canola oil, fish and specialty foods.

Feasibility studies and economic evaluations were developed with numerous firms and associations. e.g., starch production, sweeteners, pulse crop protein extraction, meat processing by-product upgrading, vegetable dehydrating, small tree fruits, cottage breweries, peat moss, alfalfa and other dehydrating crops.

Food processors used the financial assistance received from the branch to evaluate new technology in search of cost-effective methods of increasing capacity and efficiency. Almost all sectors of the agricultural

processing industry in Alberta have assessed the technology available with a view to modifying existing processing systems. During the past year, considerable financial incentive was directed to design adaptations which could be made and serviced locally, including modifications to equipment not yet available commercially.

During the year the branch gave considerable support to the design and development of contemporary packaging, especially for food products sent to outside markets where competition is keen. Twenty-one firms from the Alberta food industry used the branch's financial assistance programs to upgrade or develop new packaging.

The branch supported companies by performing energy audits, and process monitoring and control in oilseed and meat processing. Similar technical assistance was provided to dairy, greenhouse and peat processors.

Branch personnel contributed to national committees on energy, food and meats as well as industry committees assessing research and development. They provided numerous position papers on meats, oilseeds, sugar and the overall processing industry to management, other government departments and industry. Consultant studies were undertaken in meat processing technology; studies were jointly undertaken with Alberta Economic Development in robotics, vegetable processing and bakery products.

As conditions in the canola industry improved, financial assistance programs directed to canola crushing were terminated. Projects related to canola processing systems and measuring in-plant efficiency were developed.

A considerable amount of time was devoted to answering many enquiries into establishing new processing ventures in Alberta. Background information, counselling and assistance in determining feasibility were typical of branch services. Research results and business development advice were provided to individuals and firms seeking technical knowledge about processing opportunities.

## Business Analysis Branch

The business analysis branch supported the department's emphasis on marketing, further processing, and rural development by providing professional services in the areas of business and financial management. More specifically, the branch provided financial analysis for departmental assistance programs (principally the Nutritive Processing Agreement grant program and the Agricultural Societies Capital Grant/Loan Guarantee Program) and accounting and financial consultative services (management support) to smaller agribusiness firms and agricultural organizations in the province.

Project evaluation and disbursement control for the Nutritive Processing Agreement (NPA) continued to represent the major portion of branch activity. The NPA program, a federal/provincial initiative, was administered jointly by the rural development division of Alberta Agriculture and the federal Department of Regional Industrial Expansion. The program provided grants to encourage the development of the agricultural processing sector in rural Alberta. Grants made available to eligible capital projects totalled approximately $25,000,000 on $132,000,000 of project investment since the program's inception in 1975. The business analysis branch contributed the provincial manpower for evaluation and inspection of applications for NPA assistance, and in 1983-84 completed:

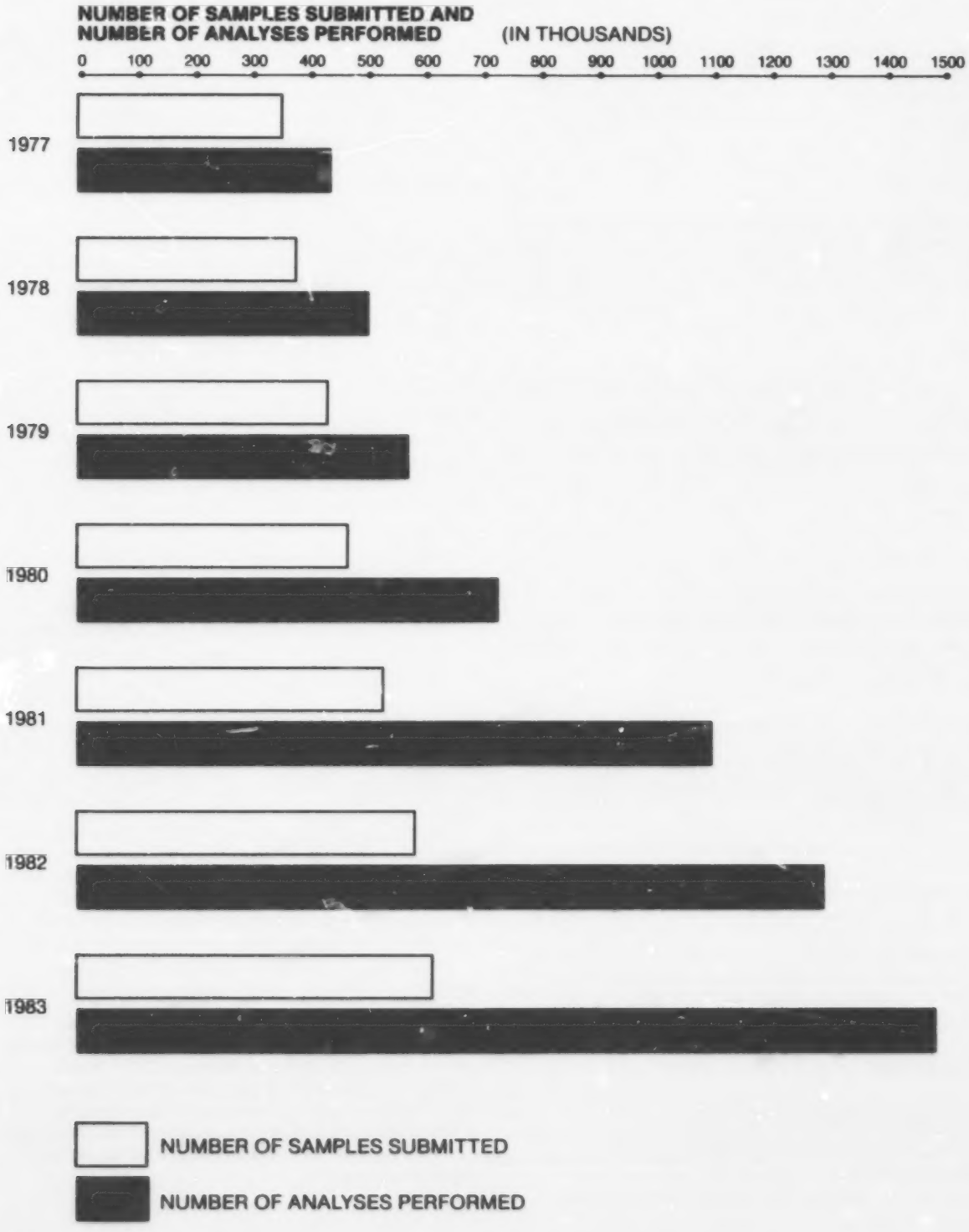
a) 44 project recommendations resulting in $3,380,132 in grant assistance offers on $15,601,943 of proposed capital investment, and

b) 74 payment inspections resulting in over $2,500,000 in program disbursements.

Branch staff were also responsible for the evaluation and inspection of grant/loan proposals submitted to the community services branch under the agricultural societies capital grant/loan guarantee program. Projects under this program involved the construction of community facilities in rural Alberta by approved agricultural societies. During 1983-84, the business analysis branch reviewed 14 projects resulting in the approval of $771,963 of grant assistance and $160,000 of guaranteed loan support. In addition, branch staff completed capital cost inspections on most of the 1982-83 program disbursements to ensure that funds were spent as intended.

Management support services to smaller processors and agricultural organizations continued to be an important role of the branch. Information was provided to a number of agribusiness firms in an effort to promote the adoption of sound business practices. Specific projects included support in accounting/bookkeeping procedures, feasibility assessment, budgeting and capital expenditure analysis.

# NUMBER OF SAMPLES SUBMITTED AND NUMBER OF ANALYSES PERFORMED BY THE FOOD LABORATORY SERVICES BRANCH DURING THE PAST SEVEN YEARS



Incentive grants were approved and administered on 73 projects undertaken with Alberta firms: 27 product and process developments; 22 regarding technology awareness, 21 for packaging development and three feasibility. Numerous product and process changes were undertaken as firms strived to improve their capabilities with a minimum of capital.

Construction of the Food Processing Development Centre at Leduc continued with considerable time spent identifying modifications and finalizing equipment and operating procedures.

## Food Laboratory Services Branch

As in previous years, the main objective of the food laboratory services branch was to ensure the quality, safety and nutritional value of Alberta's food and agricultural production at the producer, processor, exporter and consumer levels. The branch, through its laboratories in Edmonton and Airdrie, provided chemical, microbiological, compositional, organoleptical and consulting services to all sectors of the Alberta food industry, and various government agencies concerned with food production, processing, inspection, transportation, export and retail trade. The laboratories continued monitoring foods, food ingredients and other agricultural commodities for the presence of pesticide, herbicide, aflatoxin, sulfonamide, and other biocide residues. A total of 1,068 samples was analyzed for the presence of these chemicals during 1983-84. In addition, 31,171 samples of milk, milk products, honey, meat and other products were analyzed for the presence of antibiotic residues.

Rapidly changing client requirements and analytical technology meant that the food laboratories had to automate, replace or purchase new instruments, introduce new procedures, and retrain some of the staff.

From April 1, 1983 to March 31, 1984, the food laboratory services branch received 617,922 samples of foods, food ingredients and other agricultural commodities requiring 1,485,185 tests.

The graph illustrates the number of samples submitted and number of analyses performed during the past seven years.

**SAMPLES RECEIVED AND ANALYSES PERFORMED BY THE FOOD LABROATORIES IN EDMONTON AND AIRDRIE APRIL 1, 1983 TO MARCH 31, 1984**
*(figures in brackets are for the previous 12-month period)*

| | No. of Samples Analysed | | No. of Analyses Performed | |
|---|---|---|---|---|
| Milk and Cream | 42,947 | ( 36,027) | 136,516 | ( 132,048) |
| Butter | 246 | ( 210) | 824 | ( 697) |
| Cheese | 2,459 | ( 2,226) | 8,746 | ( 7,578) |
| Ice Cream | 2,097 | ( 663) | 5,078 | ( 1,869) |
| Dry Milk | 17 | ( 25) | 39 | ( 98) |
| Processing Plant Survey | 148 | ( 413) | 394 | ( 1,421) |
| Honey | 768 | ( 121) | 1,219 | ( 430) |
| Washing and Sanitizing Agents | 46 | ( 44) | 62 | ( 117) |
| Water | 377 | ( 227) | 1,034 | ( 635) |
| Eggs | 1,023 | ( 828) | 1,356 | ( 2,162) |
| Meat | 2,529 | ( 1,799) | 10,049 | ( 8,284) |
| Vegetables | 735 | ( 507) | 1,977 | ( 2,262) |
| Fish and Wildlife | 195 | ( 306) | 800 | ( 820) |
| Cereal and Products and Forage | 548 | ( 306) | 1,252 | ( 1,481) |
| Human Specimens | 5 | ( 10) | 8 | ( 13) |
| Soil | 152 | ( 281) | 166 | ( 322) |
| Research and Collaborative Studies | 739 | ( 846) | 748 | ( 879) |
| Miscellaneous Foods | 2,115 | ( 1,024) | 1,371 | ( 3,750) |
| Central Milk Testing | 560,776 | (541,000) | 1,306,604 | (1,124,969) |
| TOTALS | 617,922 | (587,039) | 1,485,184 | (1,289,835) |

# CANADA-ALBERTA SUBSIDIARY AGREEMENT ON NUTRITIVE PROCESSING ASSISTANCE

The Nutritive Processing Agreement was a capital assistance program funded at $28 million, with all costs shared equally by Alberta and the federal government. During the past year the two parties agreed to a one-year extension of the program.

The purpose of the Nutritive Processing Agreement was to:

- enhance income and employment opportunities in the smaller centres and rural areas of the province
- assist in processing products of nutritional value to animals or humans
- process products of plant or animal origin
- encourage commercial research in the areas of nutritive products or processing activities.

The level of capital assistance varied with the type of project. Assistance covered up to 35 per cent of capital on a new plant and up to 20 per cent on an expansion of a plant. Research operations were assisted up to 20 per cent for a maximum of $500,000 per project. There were restrictions on the size of project that could qualify for assistance.

In 1983-84, grants totalling $1,929,506 were forwarded as initial payments to 31 applicants. Forty-three final payments were made for a total of $653,885.

Offers of assistance were made as described in the following table.

**GRANT OFFERS MADE BY COMMODITY GROUP**

| Industry | Total Offers | Dollars Offered |
|---|---|---|
| Alfalfa | 3 | $ 242,077 |
| Bakeries | 7 | 214,771 |
| Canola | 2 | 59,817 |
| Dairy | 3 | 68,393 |
| Feedmills | 12 | 752,524 |
| Meat | 10 | 1,357,073 |
| Miscelianeous | 7 | 685,477 |
| | 44 | $3,380,132 |

An independent agency evaluated the program during the period under review. In addition, departmental and interdepartmental committees were established and recommended possible changes and future direction of the program.

# RESEARCH AND RESOURCE DEVELOPMENT

During its first full year of operation, the research and resource development sector undertook to strengthen Alberta Agriculture's activities in maintaining and expanding the province's basic agricultural resources of land and water and to improve the technological base of Alberta's agricultural industry.

The sector consisted of three divisions and one secretariat: research, resource planning and irrigation and conservation divisions, and the irrigation secretariat; two specialized sections, administration and special projects, conducted administrative and public affairs functions for all areas of the sector during the year.

## RESEARCH DIVISION

In 1983-84, the division was responsible for administration of research grant programs, development and implementation of criteria for evaluating research programs, maintenance of a comprehensive inventory of current agricultural research projects, dissemination of research information, and coordination of research activities across the department. In addition, the division assisted with upgrading the scientific background of department staff through involvement in research projects.

The research grant programs administered by the research division included Farming for the Future* and the Alberta Agriculture research fund. The division also administered the provision of grants under the Alberta crop research development program. In total, the research division managed grants for 251 projects in 1983-84, with a total expenditure of $7,842,147.

In addition to providing services for the 17 decision and policymaking bodies of Farming for the Future, the research division was involved in the activities of 21 departmental, provincial and national research-oriented committees and councils.

### Alberta Agriculture Research Fund

The research division managed the Alberta Agriculture research fund; in 1983-84, 12 projects were supported in 10 of the department's divisions. The fund was distributed to agricultural research projects for which no branch or divisional budgets were allocated.

### Farming for the Future

Farming for the Future, the agricultural research program supported by the Alberta Heritage Savings Trust Fund, completed its fifth year of operation in 1983-84. Administered by the Agricultural Research Council of Alberta, Farming for the Future comprised three funding programs in 1983-84: the research program, the on-farm demonstration program and the graduate student research support program.

The research program supported 142 projects, of which 49 were new and 93 were extended from previous years. These projects entailed the expenditure of approximately $7.0 million, bringing the total cost of the research program alone to $22.2 million during the first mandate (1979 to 1984).

Farming for the Future's on-farm demonstration program was established by the Agricultural Research Council of Alberta in 1982 to promote and support the transfer to producers of new and proven agricultural technology. In 1983-84, 72 new and renewed projects received funding at a total cost of $293,783.

The graduate student research support program provided financial support to agricultural research projects undertaken by graduate students in Alberta universities and at the Western College of Veterinary Medicine in Saskatoon. In 1983-84, 19 student projects were awarded a total of $113,624. This program ended March 31, 1984.

To expedite the transfer of research information to farmers, five producer-oriented publications were issued by Farming for the Future.

** A more detailed and comprehensive annual progress report on Farming for the Future activities is provided to the Legislature each year through the Minister of Agriculture.*

A Farming for the Future display was featured at eight Alberta events such as farm fairs, exhibitions, conferences and seminars.

The first mandate of Farming for the Future expired March 31, 1984. After an extensive review, the Alberta legislature renewed the Farming for the Future program for another three-year period.

# RESOURCE PLANNING DIVISION

The resource planning division was established April 1, 1983 to support planning activities related to the allocation, development, management and conservation of Alberta's land and water resources for the long-term benefit of the agriculture sector. During the first year, the division's objectives were examined and developed to help it identify and conduct appropriate activities.

In creating the division, there was a redeployment of some staff, but no net increase in the number of department positions.

The division was composed of three branches:

Land use branch - collected and analysed resource use information and participated in interdepartmental planning activities related to land and water resource issues.

Land classification branch - provided land evaluation and classification services related to land and water resource development and management.

Project planning branch - assisted in planning the rehabilitation, development and management of irrigation delivery systems.

In 1983-84, a major focus of the resource planning division was providing input to the Environment Council of Alberta's hearings on "Maintaining and Expanding the Agricultural Land Base in Alberta".

The agricultural land base study initiated in 1983-84 investigated 11 agricultural land and water resource expansion/intensification plans for their potential to increase agricultural production and regional economic activity in the province. Alberta Environment, Alberta Energy and Natural Resources, Alberta Transportation, and Alberta Municipal Affairs contributed to this study. An interim document, *Current Government Programs for Handling and Promoting Agricultural Expansion* and *Intensification*, was produced.

The Alberta soil land inventory coordinating committee was established in 1983-84. During the year, the committee assembled a listing of public sector activities in the areas of soil survey, land classification, ecological land classification, and others.

The resource planning division, in conjunction with Alberta Environment, initiated two irrigation-related studies: *An Inventory of Alberta's Drainage Requirements* and *An Inventory of Potentially Irrigable Land in Southern Alberta*. Financial support came from the Alberta Water Resources Commission.

Two maps were published to assist in the definition of Alberta's agricultural land resources. These were *Priority Agricultural Lands* and *Land Irrigability Potential in Southern Alberta*. A computerized data base of soil survey and crop yield information was completed in cooperation with Agriculture Canada. This system, called SIDMAP (Soil Information Data Base for Management and Planning), presented information in both tabular and mapped formats.

## Land Use Branch

The new land use branch incorporated the branch formerly known as land use activities. Staff were assigned duties in the areas of public and private land use planning, land reclamation, water resource management planning and general resource inventory.

In 1983-84, the land use branch played a major role in coordinating Alberta Agriculture's input to the agricultural land base study. The branch also

coordinated liaison with the Environment Council of Alberta's public hearings on "Maintaining and Expanding the Agricultural Land Base in Alberta."

The branch coordinated Alberta Agriculture's research activities into cost sharing for irrigation system rehabilitation, as well as its involvement in related research conducted by the University of Alberta and the Alberta Irrigation Projects Association.

Branch staff contributed to the interdepartmental resource integration committee which dealt with the integrated resource management process, through which Crown lands were allocated to meet the needs of agriculture, forestry, fish and wildlife habitat, recreation and energy development. The branch also supported the Northern Alberta Development Council in its study of agricultural land demand and development in northwestern Alberta.

The land use branch reviewed draft resource management plans from all 10 provincial regional planning commissions and forwarded its comments on these plans to the Alberta Planning Board. Three commissions had their plans approved; the remaining seven were granted an extension by the Alberta Planning Board under The Planning Act to the end of 1984. Work was also initiated during the year on a review of general municipal plans and land use by-laws.

A resource development and productivity information system was initiated by the land use branch in 1983-84. The system provided information on agricultural resource development and productivity improvement status and opportunities in Alberta.

Research activities undertaken in 1983-84 through the reclamation research technical advisory committee included approval of three new year-long projects. The plains hydrology reclamation project, scheduled for completion in 1986, remained a major focus of committee efforts.

## Land Classification Branch

Requests for land classification services continued at a high level in 1983-84. The number of requests for water rights (Level II) exceeded numbers received in previous years.

An active program was continued for supervision of consultants and preparation of land classification reports to be employed in rehabilitation and planning (Level III). In addition, salinity/wetland maps were prepared for several blocks in two irrigation districts.

A procedures manual for land classification in Alberta was prepared by branch staff, in accordance with the revised Land Classification Standards (1983) approved by the Irrigation Council.

Based on Level III reports, consultants and staff prepared wetland/salinity maps of 493,800 acres in the province. In addition, laboratory measurements and soil samples were analyzed by Alberta Agriculture's Lethbridge soils laboratory and by private laboratories under contract.

Research activity continued in 1983-84 on reclamation of solonetzic soils and determination of hydraulic conductivity of major soil series (units of soil classification). Three technical papers were prepared as a result of this research.

A comparison of soil survey reports and land classification maps (Level III) for land irrigability classification was completed in 1983-84. As well, a five-year research project was established on the monitoring of solonetzic soils under irrigation. This project was funded by the Heritage Fund through the irrigation rehabilitation and expansion program.

With the cooperation of the Alberta Research Council, studies of shallow bedrock soils were developed.

## Project Planning Branch

In 1983-84, the project planning branch supported the Irrigation Council and Alberta's irrigation districts by providing technical assistance and advisory services in the area of long-range planning for the irrigation rehabilitation program.

Emphasis was placed on preparing a preliminary forecast of the total cost of irrigation rehabilitation in the province, and of irrigation district general rehabilitation plans. The branch also provided input to river basin planning studies on the South Saskatchewan, Little Bow River and Willow Creek basins. In addition, the branch lent its support to the review of the irrigation rehabilitation and expansion program, and, in cooperation with the Alberta Irrigation Projects Association, developed an irrigation information brochure.

Improving seepage control measures, irrigation efficiency and water management through irrigation system upgrading and modernization remained branch priorities. During the year, 91 irrigation capital works project proposals were reviewed by branch staff; construction of 93 such projects was monitored. The branch also completed 300 right-of-way easements and appraisals.

Project investigation and design, as well as construction supervision, were provided to the Leavitt, Magrath, Aetna, Mountain View and Ross Creek Irrigation Districts. Monitoring and evaluation studies were continued on concrete and polyethylene lined canals, corrugated metal pipes and buried pipelines to determine the longevity of these structures under Alberta conditions. Under a branch contract, an electronic "deflectometer" instrument was developed to assist in pipeline evaluation work.

The Farming for the Future project "Development and Testing of Durable Rigid Canal Linings for the Southern Alberta Environment" was completed during the year, as were three contracts for contour mapping of the proposed Peanut Lake, Serviceberry Creek and Eagle Pond reservoir sites in the Western Irrigation District. The branch's aerial photo mapping program administered 21 aerial triangulation contracts covering approximately three million acres.

Final general rehabilitation plan reports for five smaller districts, as well as 14 component block reports for larger districts, were completed by the project planning branch during 1983-84. The branch also provided assistance in preparing, coordinating and instructing a ditch-rider training course attended by 20 participants. In cooperation with the Portland Cement Association, a concrete seminar was organized and attended by 50 participants from various irrigation districts, consulting firms and local suppliers.

The *Water Haulers Bulletin*, a newsletter presenting research results, information on new structural materials and other matters of interest to irrigation project managers, continued to be published by the branch and distributed to 200 clients.

Other activities undertaken by the project planning branch in 1983-84 included: continuous flow measurements and major structure calibration at 30 metering stations; assisting irrigation districts in preparing channel and structure requirements for Alberta Transportation's use in highway planning; and providing guide services for seven tours of provincial irrigation facilities by foreign dignitaries, students, and others.

# IRRIGATION AND CONSERVATION DIVISION

Consistent with the department's objective of ensuring that Alberta's land, soil and water resources be conserved and managed in the long-term interests of agriculture, the division concentrated on programs and services to assist farmers with soil and water conservation.

The division was composed of three branches:

Conservation and development branch - developed, promoted and transferred on-farm soil and water conservation and management technology.

Drainage branch - provided technical expertise in on-farm subsurface drainage, seepage control and groundwater flow analysis.

Irrigation branch - assisted in implementing and maintaining functional farm irrigation systems.

The division contributed to the Environment Council of Alberta's public hearings on "Maintaining and Expanding the Agricultural Land Base in Alberta". Information outlining the department's role and programs in the area of soil degradation was provided to the Senate Standing Committee on Agriculture, Fisheries and Forestry which was investigating the issue. These events, combined with the division's increased involvement with various organizations and in extension activities, helped draw greater public and media attention to the issue of soil conservation.

Abnormally dry conditions in the Peace River region and southern Alberta continued to stimulate producer interest in irrigation throughout the province, while excessive summer rain in central Alberta served to generate interest in surface drainage. During the year the division, with Alberta Environment and a number of counties and agricultural service boards, continued to work toward establishing provincial guidelines for on-farm water management systems.

In 1983, assessed acreage in the province's 13 irrigation districts increased by 22,181 acres, to give a total of 1,109,429 acres on the rolls. Approximately 950,000 acres were actually irrigated.

Demand for and provision of technical assistance to farmers continued at a high level in 1983-84. In particular, assessments of irrigation feasibility and investigations into dryland salinity showed notable increases.

The province's irrigation rehabilitation program continued to make a substantial impact on the servicing ability of irrigation districts. This, in turn, led to further improvements in on-farm systems during the year. Also in 1983-84, the Alberta Irrigation Projects Association began studies to assess the relative costs and benefits of irrigation rehabilitation investment.

## Conservation and Development Branch

The conservation and development branch was formed in 1983-84 and reflected Alberta Agriculture's increasing emphasis on conservation of the province's basic agricultural resources of land, soil and water. Staff and resources were obtained through reallocation from other areas of the department.

The branch's chief purpose was to encourage development of soil and water conservation and management technology to maintain the productivity and profitability of Alberta's agriculture sector. Soil conservation, maintenance of soil productivity, dryland salinity control, soil erosion, on-farm water management and, where appropriate, supplementary irrigation development were major areas of interest to the branch.

Applied research was a priority; however, the branch placed emphasis on technology transfer, public seminars and educational demonstrations. During 1983-84, interest in soil conservation continued to increase, and the branch highlighted this issue in several presentations, including those made to the Environment Council's public hearings on the province's agricultural land base.

Water erosion remained a major concern throughout the province, with much of the erosion damage in central and southern regions caused by heavy summer rainfall. To increase awareness of erosion problems, the branch held a series of soil conservation seminars, co-sponsored by the Prairie Farm Rehabilitation Administration and the Christian Farmers Federation. A feature film on wind erosion was started.

Branch staff assisted the fieldmen of municipal agricultural service boards with conservation projects funded by the Soil Conservation Area Program (SCAP). Under this program, 32 municipalities received grants totalling $202,000.

Dryland salinity control and soil reclamation received a high priority, with emphasis placed on vegetative controls in recharge and high water table areas. Purchase of a new drilling unit enabled two drilling crews to conduct detailed soil and groundwater investigations and subsurface drainage research.

Detailed dryland investigations were conducted on 33 quarter sections, and salinity control efforts were expanded into regions 2, 3 and 4. Staff continued to work closely with the Dryland Salinity Control Association, Alberta Environment, the Prairie Farm Rehabilitation Administration and local government.

In 1983-84, the branch began a review of The Soil Conservation Act. Emphasis was also placed on presenting agricultural service boards and agricultural fieldmen with information on various conservation topics related to the act. Presentations on conservation legislation and extension programs were made to the Western Provincial Conference on Soil Erosion and Degradation held in Saskatoon.

The branch's agrometeorology program supplied meteorological information and advice to the public and department staff. Staff developed estimates of soil moisture reserves to assist producers with decisions on cropping and fertilizer use. A study of the erosive potential of wind was completed during the year. In

addition, the possible impact of future climatic changes was assessed and the effectiveness of treating crops for frost protection was tested. The branch also contributed to various basin planning studies.

During 1983-84 initial steps were taken to plan and develop a comprehensive and coordinated approach to on-farm management of nuisance water bodies and better water management for domestic, livestock, supplemental irrigation and other purposes. Technical assistance and advice were provided to producers, and branch staff participated in a number of extension seminars.

Branch staff promoted effective use of sprinkler irrigation systems. Irrigation pump tests were conducted on 42 units, and design assistance was provided to irrigation specialists, irrigation districts, consultants and farmers. Extension activities related to sprinkler design and operation included television promotions, short training courses and news releases.

Research continued on the evaluation of trickle irrigation systems for Alberta conditions. Conditional lining test sections were installed for testing and demonstration, and a project was initiated to determine the optimum combination of material and installation techniques for shallow-buried PVC gravity distribution lines. Branch staff continued to develop computer applications to assist in providing technical services.

During the year research was initiated to determine the role of fall irrigation in cereal grain production. A comparison of limited and full irrigation in soft wheat cropping continued, and a study concerning irrigation timing in canola production was completed.

Research continued into water management on irrigated and dryland farms. Studies on applying water to border strips and on applying fertilizer through irrigation were completed.

Irrigation techniques for soil reclamation and enhanced yields were assessed during the year. In addition, several key factors in salinity development and soil reclamation were identified. Attention was also directed to examining the quality of irrigation water in the channel systems of Etzikom Coulee and the new St. Mary's River Irrigation District (SMRID) expansion project at Verdigris Coulee.

# Drainage Branch

The drainage branch placed increased emphasis on province-wide salinity, groundwater and subsurface drainage research in 1983-84. Previously, branch research was limited to Alberta's southern irrigated regions.

Branch staff conducted three Farming for the Future projects on subsurface drainage, wind turbine evaluation and canal seepage control. A new project on subsurface drainage was initiated in Barrhead, while three major studies carried out in the Taber, Milk River and Nobleford areas investigated existing and potential salinity and groundwater problems. In conjunction with the irrigation and conservation and development branches, work was initiated on a major dryland salinity study.

During 1983-84, branch staff was involved in numerous extension activities. These included presenting a credit course on subsurface drainage at the Lethbridge Community College and completing a film on the use of subsurface drainage in controlling salinity in Alberta. As well, staff prepared numerous technical papers for presentation at various national and international conferences and symposia.

Branch staff also carried out a number of activities to assist farmers, irrigation districts and government agencies in dealing with soil and groundwater problems. Among these projects was the design and installation of a major subsurface drainage system for salinity control at the Alberta Horticultural Research Center at Brooks.

Alberta Environment was assisted by the branch in constructing drainage return flow models to predict the extent of salt loading in the Oldman and Bow River systems.

# Irrigation Branch

The irrigation branch assisted farmers and various agencies in developing and managing soil and water resources to improve the efficiency and productivity of irrigated agriculture.

The irrigation branch was reorganized in 1983-84, and a number of its personnel and applied research programs were transferred to the new conservation and development branch. The irrigation branch's program emphasis was adjusted, with consultative and advisory functions replacing service-oriented activities in the resource conservation area.

In 1983-84 the level of on-farm irrigation planning and design assistance and associated development work was unchanged from the previous year. However, tighter economic times were reflected in producers exercising greater caution when making equipment purchases. Accordingly, financial mangement and economic feasibility were emphasized in the branch's consultative activities.

The dry weather experienced in 1983-84 stimulated interest in irrigation in marginal areas. As a result, branch staff conducted cost/benefit investigations and yield response projections for more than 150 producers throughout the province.

The branch's land forming activities continued at the level of the previous year. Comparison of gravity irrigation and sprinkler systems in terms of energy cost featured prominently in this activity.

In response to the economic situation, branch involvement in planning on-farm drainage and land reclamation was reduced during 1983-84. Many producers began investigating alternative methods, such as vegetative and cultural controls for managing saline affected soils. This increased some branch activities, however, the demand for follow-up development work was lower.

Development of projects under individual water licences was relatively unchanged from previous years. Activity levels were noteworthy in the Milk River, Verdigris Coulee, Little Bow River, Etzikom Coulee, Sheerness, Central Alberta, Fort Vermilion and SMRID expansion areas.

The branch's irrigation management advisory program emphasized training and education in the various aspects of irrigated farm management. Topics included fertility, salinity, high water table, crop growth, system evaluation and economics, as well as irrigation scheduling, volume and duration.

Branch staff met with many individuals and producer groups on irrigation planning, management and production. In addition, various media, such as radio, television, short courses, field days and water-users meetings, were used extensively to heighten awareness of on-farm soil and water use.

**IRRIGATION BRANCH**
**1977-84 COMPARATIVE STATISTICS**

| | 77-78 | 78-79 | 79-80 | 80-81 | 81-82 | 82-83 | 83-84 |
|---|---|---|---|---|---|---|---|
| Acres of land levelled | 5,988 | 3,366 | 3,785 | 4,516 | 3,175 | 3,262 | 3,513 |
| Sprinkler systems investigated | 427 | 418 | 573 | 405 | 420 | 560 | 640 |
| Water licence feasibility reports | 206 | 112 | 117 | 87 | 112 | 99 | 142 |
| Irrigation scheduling cooperators | 88 | 140 | 160 | 185 | 220 | 213 | 181 |
| Subsurface drainage investigations | -- | -- | -- | 39 | 29 | 32 | 161 |
| Powerline relocation grant applications | -- | -- | -- | 19 | 18 | 17 | 24 |
| Pump tests | -- | -- | -- | -- | 45 | 41 | 42 |

# IRRIGATION SECRETARIAT

The legislative authority for the Irrigation Council and the irrigation secretariat is The Irrigation Act, which states in part, "There shall be an Irrigation Council consisting of not less than seven members appointed during pleasure by the Lieutenant Governor in Council", and that "There shall be an Irrigation Secretariat consisting of one or more employees of the Department of Agriculture designated by the Minister. The Irrigation Secretariat is responsible to the Council and shall carry out its functions and duties under the direction and supervision of the Council."

The Irrigation Council continued to promote a sound irrigation policy for the province and to act as an advisory body on irrigation to the Minister of Agriculture. Duties as outlined in The Irrigation Act included: approval of additions or deletions of land to or from irrigation districts; approval of money by-laws, district rates, and budgets; and administration and approval of any expenditure made by an irrigation district to finance the rehabilitation of its works under a cost-sharing agreement with the Province of Alberta.

In 1983-84, the fourth year of a five-year rehabilitation program, the Irrigation Council administered cost-sharing agreements with the 13 irrigation districts for a total expenditure of $32,073,000 from the Alberta Heritage Savings Trust Fund. This sum represented 86 per cent of the aggregate, the remaining 14 per cent being provided by the districts.

This program was established to rehabilitate and modernize irrigation distribution systems in Alberta. Its aims were to assure irrigation users an efficient, adequate and reliable water supply, allow for limited increases in irrigated acreage as water supplies permitted, and reclaim land damaged through seepage. In fiscal 1983-84, activities undertaken through implementation of the rehabilitation program helped improve producer income and provided opportunities for family farm development in the irrigated areas, thereby benefiting the province's over-all agricultural economy.

In addition to its involvement with the rehabilitation program, the Irrigation Council, acting as the Agricultural Research Council of Alberta's irrigation program committee, recommended nine project proposals for funding by the Farming for the Future during 1984-85.

In 1983-84, the council also approved expenditures of $263,000 under the irrigation rehabilitiation and expansion research program. These funds were used to support various projects partially financed through Farming for the Future, as well as research projects concerning testing of flexible liners and monitoring of solonetzic soils. Financial assistance of $200,000 was also approved for the aerial photography program.

In 1983-84, the Irrigation Council conducted 14 meetings, including a meeting with the Ministers of Agriculture and Environment, who toured Alberta's irrigation districts. A meeting with the Environment Council of Alberta was also conducted by the Irrigation Council, as were the annual tours of 12 irrigation districts in the province. On these tours, meetings were held with the respective boards of directors of the districts to discuss matters of mutual concern.

The council also approved the addition of 11,800 acres to the irrigation district rolls. In addition, 71 project reports submitted under the irrigation rehabilitation cost-sharing agreement were approved for a total estimated construction value of $38,461,000.

To help ensure the long term productivity of Alberta's agricultural lands, the Irrigation Council updated and revised the *Standards for the Classification of Land for Irrigation in the Province of Alberta* which provided the criteria for assessing land suitable to receive water.

# Appendix

## Acts Administered By Alberta Agriculture

Agricultural Development Act
Agricultural Pests Act
Agricultural Research Trust Act
Agricultural Service Board Act
Agricultural Societies Act
Agrologists Act
Animal Protection Act
Artificial Insemination of Domestic Animals Act
Bee Act
Beet Lien Act
Brand Act
Crops Liens Priorities Act
Crop Payments Act
Crop Payments (Irrigated Land Sales) Act
Dairy Board Act
Dairy Industry Act
Department of Agriculture Act
Farm Implement Act
Federal-Provincial Farm Assistance Act
Feeder Associations Guarantee Act
Fur Farms Act
Grain Buyers' Licensing Act
Grain Charges Limitation Act
Hail and Crop Insurance Act
Harvesting Liens Act
Horned Cattle Purchases Act
Irrigation Act
Irrigation Land Manager Act
Line Fence Act
Livery Stable Keepers Act
Livestock and Livestock Products Act
Livestock Brand Inspection Act
Livestock Diseases Act
Livestock Injury Act
Margarine Act
Marketing of Agricultural Products Act
Meat Inspection Act
Seed Control Areas Act
Seed Dealers Act
Seed Grain Purchases Act
Soil Conservation Act
Stray Animals Act
Surface Rights Act
Thrashers' Lien Act
Vegetable Sales (Alberta) Act
Veterinary Surgeons Act
Weed Control Act
Wheat Board Money Trust Act

# WHEAT BOARD MONEY TRUST ACCOUNT

## Notes to the Financial Statements as at March 31, 1984

**Authority**

The Wheat Board Money Trust Account operates under the authority of The Wheat Board Money Trust Act, Chapter 367, Revised Statutes of Alberta 1955.

**Investments**

Investments consist of the following:

| | 1984 | | 1983 | |
|---|---|---|---|---|
| | Amortized Cost | Market Value | Amortized Cost | Market Value |
| Debentures: | | | | |
| Provincial issues, direct and guaranteed | $52 977 | $36 464 | $52 973 | $36 431 |

## Balance Sheet as at March 31, 1984

| | 1984 | 1983 |
|---|---|---|
| **ASSETS** | | |
| Deposits in trust with the Province of Alberta | $ 75 007 | $ 76 412 |
| Accrued interest | 1 425 | 1 424 |
| Investments, at amortized cost | 52 977 | 52 973 |
| | $129 409 | $130 809 |
| **LIABILITIES AND UNEXPENDED FUNDS** | | |
| Unexpended funds, Statement B | $129 409 | $130 809 |

# Statement of Revenue, Expenditure and Unexpended Funds for the Year Ended March 31, 1984

| | 1984 | 1983 |
|---|---|---|
| **REVENUE** | | |
| Interest and amortization of discounts | $ 11 000 | $ 13 560 |
| **EXPENDITURE** | | |
| Scholarships and bursaries | 12 400 | 12 600 |
| Travel | 110 | |
| | 12 510 | 12 600 |
| Excess of expenditure over revenue | (1 510) | 960 |
| Unexpended funds at beginning of year | 130 809 | 129 849 |
| Unexpended funds at end of year | $129 299 | $130,809 |